THE EAST AFRICAN TRADE AND TRANSPORT FACILITATION PROJECT (EATTF)

AFRICAN DEVELOPMENT BANK GROUP

PREPARATION OF A TRANSPORT FACILITATION STRATEGY FOR THE EAST AFRICAN COMMUNITY

ANNEXES B, C, D, E, & F
FINAL REPORT

Bureau for Industrial Cooperation
College of Engineering and Technology
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22nd October, 2012

FINAL REPORT

ANNEX B 1

HARMONISATION OF ENVIRONMENTAL POLICIES, LAWS AND REGULATIONS

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GLOSSARY AND ACRONYMS

CDA	Coastal Development Authority
EA	East Africa
EAC	East African Community
EMA	Environmental Management Act
EMCA	Environmental Management Coordination Act
EEZ	Exclusive Economic Zones
EIA	Environmental Impact Assessment
EIAR	Environmental Impact and Audit Regulations
EIAGAP	Environmental Impact Assessment Guidelines and Administrative Procedures
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
FORENWA	National Fund for Environment in Rwanda
INECN	*Institut National pour l'Environnement et la Conservation de la Nature*
KWS	Kenya Wildlife Service
LFR	Local Forest Reserve
MINATE	Ministry of Territorial Development, Environment and Tourism
NEMA	National Environmental Management Act
NEMC	National Environmental Management Council
NES	National Environment Secretariat
NFR	National Forest Reserve
NGOs	Non Governmental Organizations
POPs	Persistent Organic Pollutants
PPCSCA	Permanent Presidential Commission on Soil Conservation and Afforestation
REMA	Rwanda Environmental Management Authority
TARDA	Tana and Athi Rivers Development Authority
TWPF	Tanzania Wildlife Protection Fund
VF	Village Forest
URT	United Republic of Tanzania
WPMA	Water Resources Management Authority

EXECUTIVE SUMMARY

Introduction

This thematic area is on Environmental Regulations and Standards which is divided into two major parts. The first deals with a review of Environmental Policies, Laws and Regulations while the second reviews Environmental Standards and EIA Guidelines. The life of the people in the East African Community is intimately connected to the environment, and their survival and that of the future generations depend on the harmonious relationship with the environment. Therefore, people in East Africa have no choice but to strive to manage the environment and its natural resources in ways that enhance the potential for growth and opportunity for sustainable development of the present and future generations.

In recognition of this fact, the Treaty for the Establishment of the East African Community calls for the Partner States to cooperate in all issues of the environment and natural resources management. The Treaty urges the Partner States to cooperate to preserve, protect and enhance the quality of the environment and to ensure sustainable utilization of shared natural resources. Moreover, the Treaty requires the Partner States to undertake to conclude such Protocols as may be necessary in each area of cooperation which shall spell out the objectives, scope of, and institutional mechanisms for co-operation and integration. Pursuant to this requirement the Partner States in 2006 concluded the Protocol on Environment and Natural Resources Management.

This Protocol seeks to, inter alia, promote sustainable development and sustainable utilization of the Partner States' environment and natural resources through prevention of activities that are detrimental thereto, and to promote development and harmonization of policies, laws and strategies for environment and natural resources management to support sustainable development.

The Protocol obligates the Partner States to manage the environment and natural resources in accordance with the environmental principles and natural resources management, such as, the principle of the fundamental right of the people to live in a clean and healthy environment; the principle of sustainable development; the principle of public participation in the development of policies, plans, processes and activities, the principle of notification in cases of activities with trans-boundary impacts; the principle of environmental impact assessment; the principle of environmental audit and monitoring; the polluter pays principle; the user pays principle; the precautionary principle and the principle of gender equality, just to mention some of them.

The questions worthy consideration here are: to what extent have the Partner States committed themselves to achieving this obligation? And, to what extent have the Partner States sought to harmonise their policies and laws? The review in the first part attempts to address these questions.

It is not in dispute that activities in the road sector, such as, projects on road construction and rehabilitation and motor transport generally affect the environment and natural resources in many ways. Road activities may, in short, lead to serious environmental degradation and other untold hazards. Management of the environment and natural resources from this perspective through the passage of sound environmental policies, laws and strategies is, therefore, indispensable.

Review of National Environmental Policies

The review of the applicable national policies in all the Partner States showed that all countries advocate for the passage of environmental laws and strategies that will guarantee sound management and exploitation of the environment and natural resources for the present and future generations. The policies which cut across various sectors of the Partner States are generally speaking in harmony with the environmental principles and natural resources management advocated by international and regional environmental instruments, such as, the EAC Protocol on Environment and Natural Resources Management. Therefore, in terms of policies it was the finding of this review that similarities override by far the divergences in this area.

Review National Constitutions

A review of the national constitutions equally pointed in the same direction. Partner States have all endeavoured to incorporate the environmental principles in their constitutions albeit in preambles to the constitutions. Purposeful interpretation of the constitutional provisions by superior courts in the region has positively contributed in enriching enjoyment of environmental related human rights by the people. However, it was observed that recently enacted constitutions such as that of Kenya were more progressive in articulating these principles and, or rights. The establishment of the Land and Environmental Law Division of the High Court of Kenya coupled with the simplified procedures on environmental litigation are cases in point.

Review of National Environmental Laws

Like the policies, it was also the conclusion of this review that Partner States have enacted environmental laws which subscribe to the environmental principles and sound natural resources management. Apart from the specific environmental legislation there is also a myriad of pieces of legislation scattered almost all over the sectors, such as, land, water, and wildlife and forest resources management.

Divergences in National Legislation

Divergences in the national legislation were noted in the following areas. First, except for Tanzania, the rest of the Partner States have not enacted a specific environmental legislation on the road sector. As such, these States have continued to rely on the general law and regulations on environment instead of developing and relying on specifically tailored road sector regulations, standards and guidelines in mainstreaming environmental assessment and management into road projects and activities.

Secondly, there is diversity in the approach in setting environmental standards among the Partner States. Some States have prescribed the environmental standards in regulations made under the environmental legal framework while others have delegated this function to sector Ministries or statutory bodies depending on the nature of the regulations. For example, regulations on water discharge and effluent have invariably been made by Ministers responsible for water instead of the Minister responsible for environment matters or the road sector in the case of Tanzania.

Thirdly, the environmental statutes have created a multitude of environmental institutions/organs from national to local level. This calls for proper co-ordination to avoid duplication of functions

among the institutions/organs. Creation of environmental institutions/organs specifically for the road sector to compliment those established under the general environmental legal framework is highly recommended buttresses further the argument on close coordination of these institutions.

Fourthly, Partner States are at different stages of passage of environmental regulations, standards and guidelines on the environment generally and the road sector in particular. The challenge is to formulate such regulations, standards and guidelines which respond to the EAC Protocol, harmonious and comprehensive enough to cover all environmental areas susceptible to road sector activities. These areas include water quality; discharge of effluent; air quality; noise and vibration pollution; sub-sonic vibration; soil erosion; noxious smells; light pollution; electromagnetic waves and microwaves; and hazardous substances and materials.. Presently, there is no Partner State that has enacted and set standards in respect of all these areas as demonstrated in the second part of this thematic area.

Fifthly, there is no consistency in the Partner States on who should carry out environmental impact assessment which is a prerequisite to many projects like road construction. In Tanzania, for instance, EIA must be undertaken by an expert registered under regulations promulgated under the principal environmental law. In other Partner States regulations to this effect are yet to be enacted.

Conclusion and Recommendations

- The Partner States of Burundi and Rwanda should sign the Convention on Prevention of Pollution by Marine Dumping as long as they are also beneficiaries of the Convention;
- Environmental policies in the Partner States should be revised to advocate for the establishment of superior environmental national court or tribunals;
- Environmental rights should be removed from preambles of constitutions and placed in substantive parts of the same so that they are litigious
- Environmental laws should establish courts or tribunals to litigate specifically on environmental matters and simplify the litigation procedures in such courts
- Partner States should enact comprehensive environmental regulations and set standards to cover all areas susceptible to activities in the road sector and this function should be done in collaboration with agencies or institutions on standards
- Partner States should adopt environmental EAC standards in areas where they are available

1. INTRODUCTION

1.1 Background

The life of all East African people is intimately connected to the environment: their survival and that of the future generations depends on the harmonious relationship with the natural elements. East African people have no choice but to strive to manage the environment and its natural resources in ways that enhance the potential for growth and opportunity for sustainable development of present and future generations. East Africans do not have the luxury of ignoring the fundamental stresses at the interface of development and environment. Environmental problems are real and are not someone else's problem. A healthy economy and a healthy environment go hand-in hand. Both are needed for survival and prosperity.

The Treaty for the Establishment of the East African Community (EAC), in Article 112, calls for the Partner States to cooperate in all issues of Environment and Natural Resource (ENR) management. The Treaty requires the Partner States to cooperate to preserve, protect and enhance the quality of the environment and to ensure sustainable utilization of shared natural resources.

Moreover, Article 151 (1) mandates the Partner States to undertake to conclude such Protocols as may be necessary in each area of co-operation which shall spell out the objectives, scope of and institutional mechanisms for co-operation and integration. Acting under the powers envisaged in this Article the EAC states have concluded a Protocol on Environment and Natural Resources Management.

Meanwhile, United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, in 1992, (commonly known as Rio Declaration or Agenda 21); stresses the need to move from a development model in which sectors act independently of each other, to a model in which there is integration across sectors, where decisions take into account intersectoral effects, to improve intersectoral coordination. This involves the integration of policies, plans and programmes of interacting sectors and interest groups to balance long-term and short-term needs in environment and development. It calls for a coherent policy where priorities can be defined for the promotion of long-term economic growth, creating incentives for sustainable utilisation of natural resources, disincentives for environmental pollution and degradation, and effective management of the overall environment.

All fundamental environmental principles, including the environmental principles of sustainability, polluter pays, precaution, participation, equity, and human rights are stipulated under various international environmental instruments to which EAC states are signatories. Any road project, therefore, undertaken in EA member state must adhere to those international principles and standards, and these principles are enshrined in the local laws of EAC states as discussed herein below.

1.2 Objectives

This theme is but a sub-component of other themes of the study titled the East African Trade and Transport Facilitation Project. Under this part the Consultant was required to review the existing environmental policies, laws and regulations and make recommendations for improvement. The primary objective was to see to it that environmental law and policies pertaining to the road sector in the Member States are harmonized and, in the process, create a conducive operational and

management system for actors and stakeholders in the sector. In order to achieve this objective the following methodology was applied.

1.3 Methodology

1.3.1 Desk review

This stage was preceded with the collection of policy documents, statutes and regulations (laws) applicable in each of the Member States. Each set of documents from a Member State were reviewed with the object of comparing them with documents from other Member States. This exercise was basically done on a comparative basis by focusing on areas of convergence and divergence with a view to making the appropriate recommendations for harmonization.

1.3.2 Experts and Stakeholders' Views

The findings of the desk review were beefed up with experts' and stakeholders' views which were collected through meetings organised by the Consultant in all the Member States. These meetings were very fruitful in testing the validity and veracity of the consultant's findings based on the desk review. The meetings also offered another opportunity for the consultant to collect and review equally important additional documents which were not consulted in the previous review.

1.3.3 Task Force Meeting

The draft working paper prepared by the Consultant after receiving the views of experts was further tested and scrutinized by the EAC Task Force in a meeting organised in Dar es Salaam in September 2011. This approach ensured that the final product is a result of a participatory process by all persons, experts and practitioners in the environmental road sector. Further input is awaited from stakeholders.

1.4 EAC: Sources of Environmental Laws and Principles

There are various sources of environmental laws and principles that are applicable in EA presently. These include inter alia: the Constitutions of the respective Member States, the common law, principal legislation, subsidiary legislation (Environmental Regulations), case laws (precedents), International treaties and Conventions (both hard and soft laws) and writings of prominent environmental jurists.

1.4.1 International Environmental Instruments applicable/binding East Africa Countries

Member States in their totality or in groups are signatories/ have ratified the following international environmental Instruments.

(i) Convention on Biological Diversity (CBD) of 1992 (All five countries are signatories)

Article 14 of the Convention recognizes EIA as an important decision-making process enhancing the conservation of biological diversity. Accordingly, parties to the CBD are obliged to introduce EIA during the preliminary stages of activities which are likely to entail significant changes in biodiversity or to have adverse effects on it. Only after the EIA and based on its results shall the decision on the realization of planned measures be taken. Furthermore, signatory states are expected to prevent or to minimize adverse effects on biodiversity in general as well as to facilitate public participation in Environmental Impact Assessments (EIA).

(ii) Ramsar Convention on Wetlands of International Importance

Signatories are: Tanzania, Kenya, Rwanda and Burundi. According to the Ramsar Convention on Wetlands of International Importance, 50% of wetlands globally have been lost over the last century. According to the Convention widespread degradation and loss is triggered by the development of infrastructure (road construction), land conversion and deforestation.

(iii) African Convention on the Conservation of Nature and Natural Resources

Signatories are: Tanzania, Kenya, Uganda and Burundi. It calls for Parties to take effective measures to prevent land degradation, and to that effect to develop long-term integrated strategies for the conservation and sustainable management of land resources, including soil, vegetation and related hydrological processes. (Road construction can degrade land, vegetation and hydrological processes, if not well managed)

(iv) Convention Concerning the Protection of the World Cultural and Natural Heritage

Signatories are: Tanzania, Kenya, Uganda, Rwanda and Burundi. Parties are obliged under article 4 to recognize and undertake the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage. Hence, development projects such as road construction cannot be undertaken if they will end up destructing/degrading a natural heritage site.

(v) Montreal Protocol on Substances that Deplete Ozone Layer

Signatories are: Tanzania, Kenya, Uganda and Rwanda. Improved road networks connecting all the EA Member States will usher in increased importation of motor vehicles. Motor vehicles' emissions deplete the ozone layer, hence, the need to protect the ozone layer by taking precautionary measures to control equitably total global emissions of substances that deplete it.

(vi) Vienna Convention for Protection of Ozone Layer

Signatories are Tanzania, Kenya and Uganda. Its relevance is as the Montreal Protocol (above).

(vii) Convention for the Prevention of Marine Pollution by Dumping of Marine Wastes and other Matter

Signatories are: Tanzania, Kenya and Uganda. It prohibits the dumping of certain hazardous materials, requires a prior special permit for the dumping of a number of other identified materials and a prior general permit for other wastes or matter. Hard waste remnants from road construction activities may be dumped into the sea.

(viii) UN Framework Convention on Climate Change

Signatory states are: Tanzania, Kenya, Uganda, Rwanda and Burundi. Road construction paves a way to increased vehicle importation and usage leading to increased emissions. This constitutes an adverse effect leading to climate change. "Emissions" means the release of greenhouse gases and/or their precursors into the atmosphere over a specified area and period of time. (See article 1 of the Convention)

Table 1 highlights the key international instruments to which Member States are signatories. It is gratifying to note that all the Member States have signed the instruments except one on marine pollution. The two States of Burundi and Rwanda as beneficiaries of the marine environment are equally urged to sign it.

Table 1: Key International Environmental Instruments (Convergences and Divergences)

	BURUNDI	KENYA	RWANDA	TANZANIA	UGANDA
Convention on Biological Diversity(CBD)	√	√	√	√	√
Ramsar Convention on Wetlands of International Importance	√	√	√	√	√
African Convention on the Conservation of Nature and Natural Resources	√	√	√	√	√
Convention Concerning the Protection of the World Cultural and Natural Heritage	√	√	√	√	√
Montreal Protocol on Substances that Deplete Ozone Layer	√	√	√	√	√
Vienna Convention for Protection of Ozone Layer	√	√	√	√	√
Convention for the Prevention of Marine Pollution by Dumping of Marine Wastes and other Matter	×	√	×	√	√
UN Framework Convention on Climate Change	√	√	√	√	√

Recommendation

As beneficiaries of the marine environment both Burundi and Rwanda are urged to sign the Convention for Prevention of Marine Pollution by Dumping of Marine Wastes and other Matters.

1.4.2 Regional Environmental Treaties and Initiatives Binding East Africa Countries

(i) The EAC Treaty

The EAC Treaty, in Article 3(c), entrusts the Community with the mandate to ensure: "*…the promotion of sustainable utilization of the natural resources of the Member States and the taking of measures that would effectively protect the natural environment of the Member States*." This Article is echoed in other Articles of the Treaty particularly those relating to infrastructure and related services. For example:

Article 90 of the treaty addresses roads and road transport. Article 90(q) in particular, calls for establishment of common road design and construction standards for the trunk roads connecting the Member States and promote the use, as much as possible, of local materials and resources. Use of local resources imports some elements of environmental degradation, hence, necessitating some measures to counter such degradation.

Further, Article 111(1) of the Treaty insists on Member States' recognition that development activities (such as road construction projects) may have negative impacts on the environment leading to the degradation of the environment and depletion of natural resources and that clean and healthy environment is a prerequisite for sustainable development. As a result Article 112(1) (a) calls for development of a common environmental management policy that would sustain the eco-systems of the Member States, prevent, arrest and reverse the effects of environmental degradation.

Besides, Article 112(1)(c) commands Member States to take measures to control trans-boundary air, land and water pollution arising from developmental activities.(development activities include road construction projects) and integrate environmental management and conservation measures in all developmental activities such as trade**, transport**, agriculture, industrial development, mining and tourism in the Community. More importantly, Article 112(2) commits the Member States to adopt common environmental control regulations, incentives and standards. Also the States are required to develop capabilities and measures to undertake environmental impact assessment of all development project activities and programmes.

(ii) EAC Protocol on Environment and Natural Resources Management 2006

This Protocol was done at Arusha in April 2006 to succeed the Memorandum of Understanding for Cooperation on Environment Management signed by the founder Member States in 1998. In the Preamble to the Protocol, the Member States agreed to sign the Protocol motivated by the desire to strengthen cooperation in relation to development and harmonization of policies, laws and strategies in environment and natural resources management in the attainment of sustainable development. The Protocol is, therefore, a vital and an indispensable document when discussing laws, standards and guidelines applicable in the road sector across the region. This review gives a brief highlight of some of the key provisions of the Protocol.

- **Principles**

The Member States commit themselves to manage the environment and natural resources in the Community in accordance with, among others, the following environmental principles:

(a) the principle of the fundamental right of the people to live in a clean and healthy environment;
(b) the principle of sustainable development;

(c) the principle of public participation in the development of policies, plans, processes and activities;
(d) the principle of notification in cases of activities with trans-boundary impacts;
(e) the principle of environmental impact assessment;
(f) the principle of environmental audit and monitoring;
(g) the polluter pays the user pays principle;
(h) the precautionary principle;
(i) the principle of gender equality;
(j) the principle of state responsibility , which is to the effect that states have the responsibility to ensure that activities within then jurisdiction or control do not cause damage to the environment of the other States or areas beyond the limits of national jurisdiction.

These are just few of the principles enumerated in Article 4(2) of the Protocol and it is hoped that any Member State's legal frame work on environment must address these principles.

- **Objectives**

The Protocol enlists five objectives which include: to promote sustainable development and sustainable utilization of the Member States' environment and natural resources through prevention of activities that are detrimental thereto; and promote development and harmonization of policies, laws and strategies for environment and natural resources management to support sustainable development.

- **Scope of the Protocol**

The Protocol says in Article 3 that it is a document of general application and shall apply to all activities, matters and areas of management of the environment and natural resources of the Member States. The Protocol lists down 28 areas of major concern for consideration by the Member States. Some of these areas are:

(a) sustainable environment and natural resources management;
(b) management of trans-boundary resources;
(c) conservation of biological diversity;
(d) management of forest and trees resources; wildlife; water; wetland; coastal and marine; fisheries; energy, soil and land use management etc;
(e) protection of the ozone layer;
(f) pollution control and management;
(g) environmental impact assessment and environmental audit;
(h) environmental standards;
(i) public participation, access to information and justice; etc.

It follows that any environmental policy or legal frame work by the Member States worthy the name must address all these activities, matters or areas just as it is important for them to address the environmental principles mentioned above.

- **Commitment of Member States**

The Member States commit themselves, in Article 6, to ensure sound environment and natural resources management in the Community by, *inter alia*, observing international norms regarding sound environment and natural resources management; and seeking to harmonize the policies, laws and strategies in their national jurisdictions. The questions that arise here are: how far have the Member States achieved this commitment in their national policies, laws and strategies? Are there many more similarities than divergences in their documents?

The Protocol, in addition to this commitment, urges the Member States to cooperate on all environmental matters and areas set out in Chapter 3 of the Protocol running from Article 9 to 35. Basically, Chapter re-emphasizes the question of cooperation in the 28 areas and matters of concern enumerated in Article 3 of the Protocol.

Any sound analysis of the convergences and divergences of the environmental policies, laws and strategies within the Member States must, therefore, be informed by the tenor and the spirit of the EAC Treaty and the Protocol. Any divergences in the national policies, laws and strategies should be harmonized to respond to the commitment advocated by Article 6 of the Protocol.

Another equally illuminative document is the EAC Trans-boundary Environmental Assessment Guidelines for Shared Ecosystems in East Africa. These Guidelines, among other things, capture the principle of notification in cases of activities with trans-boundary impacts enshrined in Article 4(2) (g) of the Protocol.

(iii) Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region

It was adopted in 1985 and came into force in 1996. Signatories include Tanzania and Kenya: *The Nairobi Convention* provides a mechanism for regional cooperation, coordination and collaborative actions, and enables the Contracting Parties to harness resources and expertise from a wide range of stakeholders and interest groups towards solving interlinked problems of the coastal and marine environment.

(iv) Nile Basin Initiative (NBI)

Members are Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Sudan, Uganda, Tanzania, Kenya and Rwanda. All the Member States are now signatories to this Initiative. Rwanda hosts one of the NBI programs, the *Nile Equatorial Lakes Subsidiary Action Program* (NELSAP) and two of its trans-boundary projects – the *Kagera River Basin Trans-boundary Integrated Water Resources Development Project* (TKTIWRDP) that covers Rwanda, Burundi, Tanzania and Uganda; and the *Rusumo Hydropower Project* that is implemented by the tripartite states of Burundi, Rwanda, and Tanzania. Road construction activities may affect river basin in many ways including but not limited to water pollution from construction materials.

These are just few of the international and regional instruments on environment which may be relevant to this theme.

2. REVIEW OF NATIONAL ENVIRONMENTAL POLICIES

2.1 BURUNDI

Unlike the other Member States, Burundi does not have a policy document on environment although there is a piece of legislation on environment which was enacted in year 2000.

2.2 KENYA

2.2.1 National Environment Action Plan Framework (NEAP 2009-2013)

(i) Overall goals and Objectives

The NEAP aims at providing a broad framework for the coordination of environmental activities by all actors i.e. private sector and Government to guide the course of development activities. It is a step towards integrating environment and development for better management of resources.

(ii) Environmental Principles

There are several environmental principles addressed by the Plan such as:

- **The principle of sustainability**: The environment and its natural resources can meet the needs of present as well as those of future generations if used sustainably (para b).
- **Polluter pays principle**: For sustainable management, the polluter pays principle should apply (para j).
- **Precautionary Principle**: Effective measures should be taken to prevent any threats of damage to the environment, notwithstanding lack of full scientific certainty (para m).
- **Public Participation**: The Plan reiterates that public participation including women and youths is essential in proper environmental management. Also private sector participation in environmental management is essential for sustainable development. (para i and l respectively).
- **Access to justice:** Access to judicial and administrative proceedings, including redress and remedy, is essential to environmental conservation and management (para k).
- **International Cooperation**: International co-operation and collaboration is essential in the management of environmental resources shared by two or more states (para o).
- **Resettlement policy**: This principle advocates for resettlement of people in another equally habitable place if they are displaced by any development project. In many of the donor funded projects this has now become one of the primary conditions for the recipient country before funds are released. Kenya has a Resettlement Policy Framework which advocates for, *inter alia,* preparation of resettlement plans for people who would be affected by development projects including road projects. It was strongly argued by Kenya that this principle has of late become a snag in implementing road projects because development members are always reluctant to release funds before resettlement is done. Tanzania also raised the same concern. Resettlement which is part of social impact of any development project is supposed to be done when carrying out the EIA. Issues were raised whether the Consultant could pursue this matter further and come up with recommendations on harmonisation. But it was rightly observed by the EAC Secretariat that this matter was outside the ToRs which requires an independent study in order to determine the magnitude of the problem and come up with viable recommendations for harmonization. For example, it was rightly argued by Uganda that harmonization in this area may be difficult to achieve because of the different policy and legal regimes regulating land tenure and land ownership in the Member States. For instance, in Tanzania land is under the general custody of the President who grants it to occupiers on fixed terms whereas in Uganda land is considered to be private property permanently owned by those who occupy it.

(iii) Sectoral and Cross-Sectoral Policy Statements

The Plan, conscious of what is provided in Articles 9 – 35 of the Protocol commits Kenya to enact an environmental legislation that will provide for full realization of sound environment and natural resources management. Thus, in essence, the Plan replicates Chapter 3 and Article 3 of the Protocol. For example, the Plan alludes to the following matters and areas: Poverty; Technology; Land and Land Based Resources; Forest Resources; Transport/Construction Industry; Wildlife Resources; Water Resources/Wetlands; Marine Resources; Atmospheric Resources; Waste Management; Toxic and Dangerous Chemicals; and Health and Occupational Safety.

(iv) Institutional Arrangement

The Plan enlists the following institutions to be established by the applicable legislation:

- **Lead Ministry:** The lead Ministry is the Ministry responsible for environment.
- **Sector Ministries:** Environment being a multi-sectoral phenomenon, there are several other government agencies that play a role as they manage their sectors. These include:
  - Ministry of public health and sanitation-environmental health including; Public Health, the working environment radiation control and management of hazardous wastes.
  - Ministry of water development-through management of water resources utilization.
  - Ministry of Local government-through management of urban environments by urban councils.
  - Ministry of forestry and wild life-anti poaching and deforestation.
  - Ministry of Agriculture-Controls farming practices to prevent soil.

(v) Implementation strategies

- **Knowledge and awareness creation:** The Plan acknowledges that knowledge and skills at the individual and institutional level are necessary for policy analysis, institutional building, and efficient management. Thus, there is need to expand training programmes and strengthen institutional capacity in environmental management. As a capacity building tool, formal environmental education is used to increase awareness, improve extension services, and sensitize people on environmental matters. Education is also intended to benefit people outside the formal education system.

(vi) Environmental instruments

- **EIA / Environmental Audit:** The Plan insists on establishment of a system of EIA audits, monitoring, evaluation, and appeal against decisions of environmental authorities; subject new and existing projects and programmes to environmental monitoring and auditing; calls for strengthened capacities in institutions and local communities with regard to EIA; and incorporates social and cultural values in EIA.

(vii) Environmental Legislation

The plan asserts that developing a comprehensive EIA guidelines, procedures, and legislation is a vital cornerstone towards achieving sustainable environment management.

(viii) Economic Instruments

The Plan states *inter alia*: “environmental economics and accounting are tools for incorporating environmental change into economic decision making process. This enables the environment to be valued appropriately to reflect its full contribution to human welfare. As a result, adjusting and harmonizing prices through markets, fiscal and other economic policies will reflect the costs (and benefits) of using the environment”.

2.2.2 Kenya's Vision 2030

Among, other things, this Policy document seeks to build a just and cohesive society with social equity in a clean and secure environment. While the 2030 Vision aspires for a country firmly interconnected through a network of roads, railways, ports, airports, water and sanitation facilities and telecommunications; such projects must be undertaken in an environmental sustainable way.[1]

2.2.3 Roads Strategic Plan 2000-2009 and 2010-2017

It was launched with a dual purpose of improving road infrastructure condition and employment generation by using labour-based contracting approach with environmental considerations in mind.
The Plan is designed as an approach to road construction, maintenance and management which ensures optimum utilisation and development of locally available resources whenever they are technically and economically feasible and in a socially responsive and environmentally sustainable manner.

2.2.4 Kenya Roads Board HIV &AIDS Policy

The Policy acknowledges HIV and AIDS as a major threat to the world of work because it affects the most productive segment of the labour force. It has led to high staff turnover, high costs in training and replacement, high health care and employee welfare costs including funeral expenses. Thus, the Policy recommends non segregation, care and prevention of the pandemic.
Road construction projects involve construction of camps which lead to possible interaction between workers and local communities; which may lead to increased HIV/AIDS transmission to both workforce and local communities. In this case contractors will be required to follow policy directives to minimize occurance of the problem.

2.3 RWANDA

Rwanda is also endowed with a variety of policies some which have a direct bearing on the road sector.

2.3.1 Environmental Policy

The Policy was formulated in 2003, and it culminated into the enactment of the Environmental Organic Law No. 04/2005 of 08/04/200 (2005). The Policy is tailored on similar spirit of the EAC Protocol briefly reviewed above.

2.3.2 Transport Sector Policy 2008

According to this Policy the transport sector must aim at sustainable development that takes into account the transverse questions such as gender equality, environmental protection, job creation, the fight against the HIV/AIDS pandemic and other sexually transmitted diseases. In a way, the Policy revisits some of the areas and matters raised in the EAC Protocol on environment.
The Policy reiterates that the transport sector should aim at sustainable development that takes into concern, among other things, the question of environmental protection.

2.3.3 Rwanda Vision 2020

The Policy rests on infrastructural development, entailing improved transport links, energy and water supplies and emphasizes that at all times, these will be affected by a number of cross-cutting issues including, gender equality and sustainable environmental and natural resource management.

[1] http://www.kenyaengineer.or.ke/index.php/kenyaengineer/article/viewFile/217/216

The Policy envisages the carrying out of infrastructural development with a hind sight of environmental and sustainable resource management.

2.3.4 Economic Development and Poverty Reduction Strategy (EDPRS) 2008-2012

The Strategy advocates for environmental and land priorities that involve ecosystems, the rehabilitation of degraded areas and the strengthening of newly established central and decentralized institutions. The strategy emphasizes that much attention should be accorded to sustainable land tenure security through the planning and management of land registration and rational land use, soil and water conservation, reforestation, preservation of biological diversity and adaptation and mitigation against the impact of climate change.

2.3.5 National Investment Strategy 2002

Reiterates the need to develop infrastructure including road networks while taking into consideration the issue of environment protection; particularly water resource protection, fight against soil erosion and creation of forestation and protection of forests.

2.3.6 Millennium Challenge Corporation (MCC)

Rwanda was one of the 198 countries that signed the commitments to achieve the Millennium Development Goals (MDGs), which carries the mission to reduce poverty by supporting sustainable transformative economic growth in developing countries that create and maintain sound policy environments. Other countries committed to achieve MDGs are Kenya, Uganda and Tanzania. MCC has Guidelines for Environmental and Social Impact Assessment and the Guidelines ensure that Projects undertaken in a compact are environmentally sound, designed to operate in compliance with applicable regulatory requirements and are not likely to cause a significant environmental, health or safety hazard.

2.4 TANZANIA

2.4.1 National Environment Policy (1997)

It provides the approach for mainstreaming environmental issues for decision-making and defining sectoral policy action plans. The coverage of the Policy include, among others:

(i) Overall Goal and Objectives

- The Policy document seeks to provide the framework for making fundamental changes that are needed to bring environmental considerations into the mainstream of decision making in Tanzania.
- It seeks to provide policy guidelines, plans and give guidance to the determination of priority actions, and provides for monitoring and regular review of policies, plans and programmes.
- It further provides for sectoral and cross-sectoral policy analysis in order to achieve compatibility among sectors and interest groups and exploit synergies among them.

(ii) Environmental Principles

The Policy like the Kenya Plan embraces the cardinal environmental principles contained in the EAC Protocol, including: the environmental principles of sustainability, polluter pays principle, precautionary principle, principle of public participation in the development of policies, plans and processes for the management of the environment, principle of access to justice, the principle of

intergenerational equity and intra- generational equity, principle of international cooperation, the principle of common but differentiated responsibilities, equity and human rights.

- **Sustainability**: The principle of sustainability and development simply means development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Paragraph 18(a) says one of the objectives of the Policy is: to ensure sustainability, security an equitable use of resources for meeting the basic needs of the present and future generations without degrading the environment or risking health or safety.
- **Public participation** and **precautionary principles** are also covered under paragraph 34 which reads: Environmental management must be everybody's responsibility. Everyone has the opportunity to make environmentally-responsible choices that can reduce or minimise their impacts on the environment and promote sustainable development. That responsibility can only be met through cooperative efforts at all levels of society. Para 36 reads in part: Environmental issues are best handled with the participation of all citizens at the relevant level.
- **Precautionary principle**, paragraph 63 states: Although it is important to tackle immediate environmental problems, precautionary, anticipatory and preventive approaches are the most effective and economical measures in achieving environmentally sound development.
- **International cooperation**: is recognized under the Policy in the following words: Environmental problems do not recognise national boundaries of sovereignty. Any policy on the environment is a policy only on the basis of effective forms of international cooperation which take into account both ecological relationships on regional and global scales, and the interdependence of the world economy.
- On the transport sector, the Policy (para 51), states that the transport sector shall focus on the following environmental objectives:-
  - improvement in mass transport systems to reduce fuel consumption, traffic congestion and pollution;
  - control and minimisation of transport emission gases, noise, dust and particulates; and
  - disaster/spill prevention and response plans and standards shall be formulated for transportation of hazardous/dangerous materials.

(iii) Sectoral and Cross-Sectoral Policy Statements

The Policy makes the following statements in respect of various areas and matters. Among others are: Addressing Poverty; Land tenure; Technology; Biodiversity; Public Participation and Education; The Private Sector and NGOs; The Enhanced Role of Women; Water and Sanitation; Transport; and Wildlife.

(iv) Institutional arrangement

The Policy calls for the establishment of the following institutions:

- **Lead Ministry:** The lead ministry is the Ministry responsible for environment (NEP para 88). The Ministry shall be the authoritative voice and catalyst for action on behalf of the entire Government, and shall exercise overall policy, planning and implementation oversight mandate on environmental matters. It shall be the source of overall policy guidance and advice on the development of strategic environmental vision, including formulation, analysis and appraisal of broad environmental policy, as well as formulation and review of broad environmental goals, in conformity with such vision.

- **Sector Ministries:** Since environmental management is a multi-sectoral, multi-disciplinary undertaking, its success depends on the cooperation of Government agencies responsible for various aspects of environment (NEP para 94). The bulk of operational functions for environmental management such as public health, sewage disposal and water pollution control are carried out by Government departments of the relevant sector Ministries at the national, regional and local levels. For the road sector, the Ministry responsible for environmental impact assessment is the Ministry of Environment in collaboration with NEMC. The Ministry of Works is responsible for road sector environmental policies, strategies, coordination, supervision, guidance, monitoring, and follow up and reporting to relevant authorities.

- **Tanzania National Roads Agency (TANROADS):** It is a road authority responsible for development and management of regional and trunk roads. In carrying out this function TanRoads is compelled to observe sound environmental management.

- **National Environmental Management Council (NEMC**): It is an environmental regulatory body charged with functions pertaining to environmental clearance; monitoring; compliance and enforcement; research and promoting public awareness.

- **Local authorities**: Include the city councils, municipal councils, district councils, township councils, kitongoji, ward, mtaa, and village. An environmental management committee (EMC) is established for each unit with the responsibility to oversee the implementation of environmental issues.

- **NGO's**: Various NGOs have been launched and registered in Tanzania with the view of acting as watch dogs for matters concerning environmental management and protection as advocated by NEP. A good example is Tanzania Lawyers Action Team (LEAT), Tanzania Association of Foresters, and Wildlife Conservation Society of Tanzania; just to mention a few. The latter has been vocal in opposing road projects which traverse through national parks and game reserves.

(v) Implementation Strategies

The need for various training programmes for environmental protection is overemphasized in the NEP. The Policy states: Building capacity for the development of general competence is inherently a lengthy process; it takes time to train an appropriate cadre of professionals, and even longer for them to acquire mature experience. More generally, human resource development will be a priority at all levels - the general public, NGOs, public officials, technical and scientific staff(NEP para 107).

(vi) Environmental Instruments

Currently, environmental management in Tanzania is by and large done through Command and Control (CAC) instruments using laws, regulations, rules and by-laws. NEP advocates for the following environmental instruments:

- **Environmental legislation**

Environmental law is an essential component of effective environmental management and improvement of the quality of life. The inherent nature of environmental law is to set demands, impose duties, limit and create obligations for the individuals, private and public bodies. This means

that it can make a clear contribution to fit human activities into laws that govern the patterns of air, water, soils, plant and animal life (NEP para 68).

- **EIA/Environmental Audit**

Environmental impact assessment is an important management tool for improving the long-term viability of projects. Its use can help to avoid mistakes that can be expensive and damaging in environmental, social and economic terms.

(vii) Economic Instruments

This is embedded in the polluter-pays principle. The NEP states that polluter pays principle shall be adopted and implemented deterrently. In principle it shall be the responsibility of those who pollute to repair and bear the costs of pollution caused and rehabilitation, where appropriate (NEP para 76).

(viii) Environmental Standards

Environmental indicators shall be defined, for example on land use conversion ratios (rural/urban, wetland/agriculture, forest/agriculture, etc) to make possible determination of ecosystems stability/resiliency/diversity relationships, and evaluation of economic development strategies affecting natural resources(NEP para 77). Environmental standards and objectives are formulated with various objectives such as to make accessible statistical, scientific and technical information to non-technical user groups; descriptive indicators summarising sets of individual measurements pertaining to an issue, mainly to serve scientific purposes; and aggregated, policy-oriented indicators, derived from analysis and integration of information of different disciplines to contribute to policy decision-making (NEP para 78). Thus, any project including a road project will be required to address the environmental indicators by ensuring that environmental degradation/pollution is minimized during implementation of the project.

2.4.2 Tanzania Development Vision 2023

The Vision provides that sustainable human development including road projects should involve striking a balance between development pursuits, cultural considerations and basic needs on one hand and the preservation of the natural environment for the current and future generations on the other hand.

2.4.3 The National Strategy for Growth and Reduction of Poverty (NSGRP, 2005)

The Strategy ensures that development activities do not adversely affect the development needs of the future generations. For that reason, road construction projects should ensure that they abide with sustainable use of the country's natural resources and avoid causing harmful effects on the environment and on people's livelihoods.

2.4.4 The World Bank Operational Policy on Involuntary Resettlement

The Policy acknowledges that development projects that displace people generally give rise to economic, social and environmental problems and, thus, it prescribes measures to minimize the negative impacts and ensure that the displaced community benefits from the project. The Policy requires that displaced people should be:

- Compensated for their losses at full replacement costs prior to the actual move;
- Assisted with the move and supported during the transition period in the resettlement site;
- Assisted in their effort to improve their former living standards, income earning capacity and production levels or at least restore them;

- Integrated socially and economically in the host communities so that adverse impacts in the hoist communities are minimized. Compensation for the affected people is now a serious issue in the implementation of road construction projects particularly those funded by the World Bank and development members, and in some cases projects have stalled because of the failure for countries to abide by this Policy. Thus, road contractors, road agencies and governments have the obligation to see to it that this Policy is strictly observed during road development projects. This matter is further explored in the next part.

2.4.5 National Transport Policy (2003)

The Policy vision is to have efficient and cost effective domestic and international transport services, whilst at the same time maintaining maximum safety and minimum environmental degradation. The Policy is now under review to accommodate new environmental concepts such as those advocated by the EAC Protocol and those on public private partnership.

2.4.6 National Policy on HIV/AIDS (2001)

It recognizes HIV/AIDS as an impediment to development in all sectors, in terms of social and economic development with serious and direct implication on social services and welfare. Construction workers in camps site do interact sexually with local communities, which may lead to the increased transmission of HIV / AIDS to both the workforce and the local communities. HIV/AIDS as cross cutting issue has a serious impact on the road construction industry.

2.4.7 National Human Settlements Development Policy *(2*000)

The Policy outlines a number of objectives including the environmental protection within human settlement and the protection of natural ecosystems against pollution, degradation and destruction with the aim of attaining sustainable development. The Policy recognizes the impact of human activities within residential areas. Since road construction projects pass through human settlement areas contractors will be required to take measures to ensure environmental protection within human settlements, for example, by minimizing dust pollution.

2.4.8 National Land Policy (1995)

The policy emphasizes the protection of environment and natural ecosystems from pollution, degradation and physical destruction. Therefore, project management including road projects will be required to ensure protection of existing social services and ensure proper disposal of solid wastes, especially within campsites.

2.4.10 The National Water Policy (2002)

The Policy recognizes the need to protect water sources from pollution and environmental degradation and road projects could result in the degradation of water sources if not carried out properly. Thus contractors will be required to ensure that pollution of water sources is avoided or minimized during road construction.

2.4.11 Construction Industry Policy (2002)

The important issues of major concern in the Policy document range from planning, design, construction/production, procurement, repair, maintenance and demolition of physical infrastructure without causing environmental degradation. The Policy requires that project management give priority to local people/consultants/contractors. It also requires use of available local materials to ensure construction of good quality road infrastructure without causing environmental degradation.

2.4.12 The Energy Policy of Tanzania (1992)

The Policy recognizes the relationship between road condition and fossil fuel consumption energy by vehicles, which is one of the important sources of energy in the country. Therefore, the Policy recognizes the need to rehabilitate roads to minimize fuel consumption, thereby minimizing environmental pollution. Poor road conditions lead to increased consumption of fuel and increased emission of exhaust fumes. Road construction/rehabilitation projects will ensure efficient use and utilisation but also minimize environmental pollution.

2.4.13 National Gender Policy (1999)

The objective of this Policy is to provide guidelines to ensure gender sensitive plans, programmes and strategies in all sectors and institutions. The road sector should be committed to gender mainstreaming at all levels, through provision of equal opportunities to both men and women in road works and related activities.

It is evident from this review that Tanzania is endowed with a myriad of policies on the environment generally and the road sector in particular. The passage of numerous environmental policies impacting on the road sector is a deliberate attempt by the Government to provide for a sustainable environment for the present and future generations in Tanzania and the EAC generally. More importantly, the cross-sectoral and sectoral statements in the Policy underscore what has also been reemphasized in other Member States like Kenya. Conclusively, it may be argued that the presence of numerous policies in all activities, matters and areas pertaining to the environment demonstrates the Member States commitment to honouring what is contained in Articles 9 – 35 of the EAC Protocol. Thus, at the level of policy making, it may safely be argued that Member States have endeavoured to translate and incorporate the provisions of the EAC Protocol in their national policies.

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2.4.14 Tanzania Wildlife Policy, 2007

The aim of the Policy and its regulatory framework is to involve a broader section of the society in wildlife protection, utilization, management and development of protected areas. The mandate of the wildlife sector is to oversee the sustainable utilization of the wildlife resources. Road construction/ upgrading project/s affect protected ecosystem areas. Thus EIA must be carefully undertaken for all road projects crossing wildlife protected areas.

2. 4.15 National Forest Policy (1998)

The Policy's goal is to enhance the contribution of the forest sector to the sustainable development of the nation and the conservation and management of natural resources for the benefit of present and future generations. The Policy insists that EIA is a planning tool used to integrate environmental considerations in decision making process and ensure unnecessary damage to environment. The tool should therefore be applied before road projects are implemented.

2.5 UGANDA

2.5.1 The National Environment Management Policy (NEMP) 1994 was developed in 1994 as a follow up to the recommendations of the National Environment Management Action Plan, 1994.

(i) Overall Goal and Objectives

The Policy shares almost the same overall goal and objectives with the Policy documents in the other Member States. These are:

- Sustainable social and economic development, which maintains or enhances environmental quality and resource productivity on a long-term basis that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.
- Integrates environmental concerns in all development policies, planning and activities at national, district and local levels, with full participation of the people.

(ii) Environmental Principles

Like the Policy documents in Kenya and Tanzania the NEMP also subscribes to similar environmental principles which are fully contextualized in Part II of the National Environmental Act, Cap 153 of Uganda. Among other environmental principles highlighted in the Policy are:

- **Principle of sustainability**: to use and conserve the environment and natural resources of Uganda equitably and for the benefit of both present and future generations, taking into account the rate of population growth and the productivity of the available resources.
- **Polluter pays principle**: to ensure that true and total costs of environmental pollution are borne by the polluter.
- **Public participation principle:** to encourage the maximum participation by the people of Uganda in the development of policies, plans and process for the management of the environment.
- **Precautionary principle:** to conserve the cultural heritage and use the environment and natural resources of Uganda for the benefit of both present and future generations.
- **Clean environment:** to assure all people living in Uganda the fundamental right to an environment adequate for their health and well-being.
- **International cooperation:** to promote international cooperation between Uganda and other states in the field of the environment.

(iii) Institutional Arrangement:

The Policy envisages the establishment of several environmental institutions akin to those envisaged in the Policies discussed above.

- the Ministry responsible for environmental matters;
- sector ministries;
- the National Environmental Management Authority (NEMA) headed by a board of directors;
- Policy Committee on the Environment;
- Technical Committees on Environment;
- District Environment Committee;
- NGOs, intergovernmental agencies and the private sector;
- Local Environment Committee.
- Enforcement of Environmental Laws: Uganda has a special unit to assist the police in enforcement of environmental laws.

Each institution is invested with environmental functions commensurate with its level or position in the hierarchical set-up advocated by the Policy and the EAC Protocol.

(iv) Environmental Instruments

The Policy, like the other Policies in the Member States emphasizes the use of EIA, Environmental Audit etc.

(v) Sectoral and cross-sectoral policy statement

The Policy revisits the various sectoral and cross-sectoral issues and makes policy statements on the same. Policy statements form the basis of the environmental legislation. The issues range from use of lakes and rivers and their shores; use of wetlands, conservation of biological diversity; management of forests wildlife; water resources; mountain ecosystems; land use planning; protection of the ozone layer; management of hazardous waste and dangerous materials etc.

Generally speaking the Policy documents in the three Member States of Uganda, Kenya and Tanzania replicate each other, supposedly, for historical reasons and for the major reason that they are all signatories to the EAC Protocol.

2.5.2 The National Policy for the Conservation and Management of Wetland Resources (1995)

The Policy aims at curtailing the rampant loss of wetland resources and ensuring that benefits are sustainable and equitably distributed to all people of Uganda. In case of road construction, therefore, the application of environmental impact assessment procedures on all activities must be carried out in a wetland to ensure that wetland development is well planned and managed.

2.5.3 National Gender Policy (1997)

The main objective of the Policy is to mainstream gender concerns in national development processes through guiding resource allocation in all sectors to address gender inequality. The emphasis is on gender mainstreaming as a cardinal principle in all sectoral (including road construction) and district development programmes.

2.5.4 The National Water Policy 1999

The Policy objective of the Uganda government is to manage and develop the water resources of Uganda in an integrated and sustainable manner, so as to secure and provide water of adequate quantity and quality for all social and economic needs, with the full participation of all stakeholders, and so as not to leave the future generations any worse off than the current population.

The review of the environmental policies in the Member States has demonstrated quite clearly that there are more similarities than divergences in their documents. This similarity is partly shaped by the international environmental instruments which the Member States have ratified or signed and, more so, because of the EAC Protocol which brings the Member States together to a shared common vision in addressing the challenges of achieving sustainable development at the local, national and regional levels through sound environment and natural resources management. But one gap seems to emerge from this review that the policy documents do not seem to advocate for establishment of superior environmental tribunals or courts. Similarly, the environmental policy in Zanzibar does not seem to run away from this reality as shown below.

2.6 Zanzibar Environmental Policy 2002

This is a relatively new policy which was promulgated hardly four years before the EAC Protocol was drafted. The Policy draws lessons from the Environmental Management and Sustainable Development Act which was enacted six years before in 1996. The review of the Policy demonstrated that this document, like the others, embraces the environmental principles and all other values geared at sound environmental management practices. To this extent, the document

is similar to other policy documents reviewed herein above. Table 2 highlights a few areas of convergences in the policy documents review above.

Table 2: Areas of Convergence in Policy Documents

	BURUNDI	**KENYA**	**RWANDA**	**TANZANIA**	**UGANDA**
National Environmental Policy	×	√	√	√	√
Overall goals and Objectives (integration of environmental concerns in all development policies)	×	√	√	√	√
National Development Vision/National Vision	√(2025)	√ (2030)	√ (2020)	√(2025)	√ (2020)
National Land Policy	×	√	√	√	√ (Draft-of March2011)
National HIV/AIDS Policy	√	√	√	√	√
National Water Policy/Master Plan	×	√	√	√	√

Recommendation

Policies should be revised to advocate for establishment of superior environmental tribunals or courts in the Member States

3. NATIONAL ENVIRONMENTAL LEGISLATION: CONSTITUTIONS

3.1 BURUNDI

Article 52 of the Burundi Constitution 2005 states inter alia:
Everyone is entitled to obtain satisfaction on economic, social and cultural rights indispensable for his dignity and free development of his person, through national effort and taking into account the country's resources.

The phrase "taking into account the country's resources"; carries a message or call for environmental protection. Apart from this provision, there is no other article in the Burundi Constitution that addresses environment. Thus, it can be submitted that Burundi's constitution is less loaded with environmental provisions compared to the rest of the constitutions in the Member States.

3.2 KENYA

The Kenyan Constitution 2010 proclaims in its preamble as follows: *"RESPECT of the environment, which is our heritage, and determined to sustain it for the benefit of future generations…"*

3.2.1 Rights and Fundamental Rights

Chapter 4, Part 2 provides in Article 26 that: "*Every person has the right to life*". This right has been construed by courts of law in EA, to have been violated where environment is polluted leading to infection affecting human life and or death. Article 35 provides further that *"Every citizen has the right of access to information held by the State"*. Information also includes environmental information. And, Article 42 addresses environment and states categorically that: Every person has the right to a clean and healthy environment, which includes the right to have the environment protected for the benefit of present and future generations through legislative and other measures.

3.2.2 Environmental Principles

Article 69 provides that the State shall ensure sustainable exploitation, utilisation, management and conservation of the environment and natural resources, and ensure the equitable sharing of the accruing benefits. Paragraph d,f,g and h of the same Article provides for the principles of encouragement of public participation in the management, protection and conservation of the environment; establishment of systems of environmental impact assessment, environmental audit and monitoring of the environment; alimentation of processes and activities that are likely to endanger the environment; and utilise the environment and natural resources for the benefit of the people of Kenya. It is a duty of every Kenyan to cooperate with State organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of natural resources (Article 69(2)).

The Constitution also gives *locus standi* to every person who alleges that a right to a clean and healthy environment recognised and protected under Article 42 has been, is being or is likely to be, denied, violated, infringed or threatened to apply to a court for redress in addition to any other legal remedies that are available in respect of the same matter (Article 70). Under Article 70(2), upon application the court may make any order, or give any directions, it considers appropriate to prevent, stop or discontinue any act or omission that is harmful to the environment; to compel any public officer to take measures to prevent or discontinue any act or omission that is harmful to the environment; or to provide compensation for any victim of a violation of the right to a clean and healthy environment.

The Kenya Constitution in short, restates the environmental principles as found in the EAC Protocol.

3.3 RWANDA

The Rwanda Constitution 2003, like her counterparts, acknowledges the right to healthy environment. Article 48, states *inter alia*:

Every citizen is entitled to a healthy and satisfying environment. Every person has the duty to protect, safeguard and promote the environment. The State shall protect the environment. The law determines the modalities for protecting, safeguarding and promoting the environment.

This Constitutional provision while recognizing one of the environmental principles leaves it to the legislative organ to pass a specific law on the environment.

3.4 TANZANIA

3.4.1 Rights and Fundamental Rights

In Tanzania, the right to give and receive information is enshrined in the Constitution of the United Republic of Tanzania 1977. Article 18(2) states that *"every citizen has a right to be kept informed of developments in the country and in the world which are of concern to the life of the people and their work and of question or concern to the community."* The interpretation of this provision has been given a broad interpretation to include rights to give and receive information on environment and natural resource management; thus information about road construction projects and impacts on environment, ought to be accessible by citizens.

3.4.2 Right to Life and Health Construed as Inclusive of Right to Clean Environment

Health and human rights have been incorporated in international and regional human rights treaties and in national laws, policies and strategies throughout Africa, Tanzania inclusive.

The Constitution of Tanzania has a provision on the right to life in the form of Article 14, which provides that every person has the right to life and to the protection of their life by society in accordance with law. The High Court in a landmark ruling in the case of *Festo Balegele v. Dar es Salaam City Council (Misc. Civil Case No. 90, 1991)* interpreted this Article to mean that persons are entitled to a healthy environment, and held that the City's decision to locate the garbage dump near residential areas violated plaintiffs' constitutional rights to a healthy environment.[2]

[2] UN Agenda 21, Institutional Aspects of Sustainable Development in the United Republic of Tanzania, available at http://www.un.org/esa/agenda21/natlinfo/countr/tanzania/inst.htm (Accessed on 13 October 2010 at 11.06 am)

3.4.3 Right to Protect Natural Resources

The Constitution also provides in Article 27(1), the importance of sustainable use of natural resources for the benefit of the citizens of Tanzania that: *"every person is obliged to safeguard and protect the natural resources of the United Republic, state property and all property jointly owned by the people, as well as to respect another person's property."* Natural resources referred to in Article 27(1) have been interpreted to mean: forests and other biological resources, landscapes, rivers, lakes and other water bodies, land, soil, minerals and terrestrial wildlife and fish.

The duty to protect these resources, and to conserve environment from waste and squander has been endowed with every citizen of Tanzania by virtue of Article 27(2) which provides, *inter alia: "All persons shall be required by law to safeguard the property of the state authority and all property collectively owned by the people, to combat all forms of waste and squander, and to manage the national economy assiduously with the attitude of people who are masters of the destiny of their nation."*

Finally, Article 9(1) (c) requires the state authority and all its agencies to direct all their policy and business towards securing the *"conduct of public affairs in a manner designed to ensure that the national resources and heritage are harnessed, preserved and applied toward the common good and the prevention of the exploitation of one man by another"*

The Constitution of Tanzania was enacted about 30 years before the EAC Protocol was signed in 2006. However, liberal interpretation of its Articles lead to the unavoidable conclusion that they are all geared at recognizing the environmental principles pronounced by the EAC Protocol and other international environmental instruments. The current drive towards the passage of a new constitution will probably result into enactment of a constitution that expressly acknowledges these principles like the Kenya constitution does.

3.5 UGANDA

Uganda too, like her counterparts, has incorporated environmental issues in her Constitution. Under the National Objectives and Directive Principles of State Policy, Clause XII in the preamble, states, inter alia:
"…The State shall protect important natural resources, including land, water, wetlands, minerals, oil, fauna and flora on behalf of the people of Uganda. The Constitution goes on to provide further for environmental matters in its Articles as follows:

3.5.1 Environmental Principles

The National Objectives and Directive Principles of State Policy, also stress on the obligation of the state to promote sustainable development and public awareness of the need to manage land, air, and water resources in a balanced and sustainable manner for the present and future generations. Directive Principle XXVII states that:
"*The utilization of natural resources of Uganda shall be managed in such a way as to meet the development and environmental needs of the present and future generations of Ugandans and in particular, the State shall take possible measures to prevent or minimize damage and destruction to land, air and water resources resulting from pollution and/or other causes."*

The Constitution provides, additionally, that the protection and preservation of the environment shall be through an enactment of a piece of legislation by the Parliament.

3.5.2 Rights and Fundamental Rights

Article 22 guarantees the right to life which can be construed liberally to cover right to healthy environment. Article 39 promulgates that *"Every Ugandan has a right to a clean and healthy environment"*. Article 41 provides for the right to access information in the possession of the State or any other organ or agency of the State, which can also be broadly construed as covering environmental information.

Convergence

A review of the five constitutions in the Member States shows that all the countries place high priority on environment and sustainable development.

Divergence

It is the level of emphasis which varies from one constitution to another with recently enacted constitutions like that of Kenya being more emphatic in articulating the environmental principles advocated by international environmental instruments as well as regional instruments like the EAC Protocol. It is probably the level of translation of this priority in the national environmental legislation, standards and guidelines that will show the marked difference among the Member States.

Recommendations

- *Constitutions being general documents should not go further down to articulate environmental issues in each and every sector like the transport or road sector.*
- *Environmental provisions contained in constitutional preambles should be elevated to enforceable constitutional rights by placing them in the substantive provisions of the constitution*
- *Constitutions should establish superior environmental courts to enforce environmental matters and simplify the litigation process in such courts*

4. FRAMEWORK FOR ENVIRONMENTAL LEGISLATION

4.1 BURUNDI

4.1.1 Environment Code, Act No. 1/010 of June, 2000

This is a relatively recent legislation compared to the environmental legal frameworks applicable in other Member States like Uganda which was enacted in 1995. Like any other environmental legislation, this law is fairly comprehensive covering almost all aspects of environmental and natural resources management, such as, environmental principles, management of forests, energy, water resources, soil erosion and land use, desertification, public inquiry/participation, management of wetlands, wildlife, legal institutions etc.

The Environmental Code, being a principal legislation empowers either the Minister or the President to make regulations in form of Ministerial Ordinances or Presidential Decrees respectively. For example, Articles 17 and 18 of the Code empower the President to establish a Coordination Unit responsible for environmental protection and management. Similarly Article 30 empowers either the President or the Minister to make regulations on soil protection against desertification, soil erosion, land degradation and pollution.

Further, Article 56 delegates power to the Minister to enact a ministerial ordinance which creates special protection of buffer zones surrounding water resources. Moreover, Articles 60 and 61 empower the President or the Minister to make regulations prescribing air emission standards and list of prohibited harmful substances. These regulations should definitely cover the construction industry including the road sector. Regulations for tariffs on emission permits are regulated by regulations to be made by the Minister under Article 63.

Regulations on public participation or inquiry and the procedure thereof particularly on establishment of classified and protected forests, national parks and natural reserves may be promulgated by the Minister under Articles 73 and 75. Other key provisions in the Code entitling the Minister or the President to make regulations are scattered in various Articles like 87, 90, 91, 102, 104, 115, 116, 123 and 132 just to mention a few.

The major challenge lying ahead of the Government of Burundi is to enact the said regulations so that there is, in the final analysis, a comprehensive and water tight legislation standards and guidelines to ensure sustainable environment and natural resources management.

4.2 KENYA

4.2.1 Environmental Management and Coordination Act (EMCA), 1999

(i) General Principles

The general principles mentioned in the Policy are reflected in Part II of the Act as presented hereunder namely, every person in Kenya is entitled to a clean and healthy environment and has the duty to safeguard and enhance the environment. The Act provides redress to a person alleging infringement of a right to health by applying to the High Court for redress and the High Court may make such orders, issue such writs or give such directions as it may deem appropriate to prevent any act or omission deleterious to environment, require any ongoing activity be subjected to an environment audit, compel the persons responsible for the environmental degradation to restore the degraded environment as far as practicable to its immediate condition prior to the damage and

provide compensation for any victim of pollution and the cost of beneficial uses lost as a result of an act of pollution.

Section 4 provides *locus standi* to any person who feels aggrieved by any environmental degradation, notwithstanding that such a person cannot show that the defendant's act or omission has caused or is likely to cause him any personal loss or injury provided such action is not frivolous and does not abuse court process. Section 5 reiterates the environmental principle that in rendering decisions the High Court shall be guided by the principles of: sustainable development, the principle of participation in the development of policies, plan and processes for the management of the environment, the cultural and social principles traditionally applied by any community in Kenya for the management of the environment or natural resource in so far as the same are relevant and are not repugnant to justice and morality or inconsistent with any written law, the principle of international co-operation in the management of environmental resources shared by two or more states; the principle of intergenerational and intergenerational equity; the polluter-pays principle; and the pre-cautionary principle. This court procedure does away with the legal formalities common in other civil litigation. It is therefore a positive development which ought to be emulated by other Member States in the region.

(ii) Institutions Established by the Act

Based on the spirit of the Policy the following institutions are now formally established under the Act:

(a) National Environmental Council (NEC)

The Council shall have the following functions: be responsible for policy formulation and directions for purposes of the Act; set national goals and objectives and determine policies and priorities for the protection of the environment; promote co-operation among public departments, local authorities, private sector, Non-Governmental Organizations and such other organizations engaged in environmental protection programmes; and perform such other duties as assigned under the Act (Part III section 1).

(b) National Environmental Management Authority (NEMA)

The object and purpose for which the Authority is established is to exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment (Part III section 9). The Authority is also empowered to: co-ordinate the various environmental management activities being undertake by the lead agencies and promote the integration of environmental considerations into development policies, plans, programmes and projects with a view to ensuring the proper management and rational utilization of environmental resources on a sustainable yield basis for the improvement of the quality of human life in Kenya. (Part III section 9(2)).

The Authority is required to create a register of those activities and industrial plants and undertakings which have or are most likely to have significant adverse effects on the environment when operated in a manner that is not in conformity with good environmental practices (Part III section 28(1)). Moreover, the Minister responsible for finance may, on the recommendations of the Council, prescribe that persons engaged in activities or operating industrial plants and other undertakings identified under subsection (1) pays such deposit bonds as may constitute appropriate security for good environmental practice(Part III section 28(2)).

(c) Director General

The Director-General is the chief executive of the authority and is subject to the Act, responsible for the day to day management of the affairs of the Authority (Part III section 10(14a)).

(d) National Environmental Trust Fund

The Act establishes a fund to be known as "National Environmental Trust Fund". The sources of the Fund shall be in form of donations, endowments, grants and gifts from whatever source and such sums of money or other assets as may be specifically designated for the Trust Fund by the Authority out of its General Fund (Part III section 24(3)). The object of the Trust Fund is to facilitate research intended to further the requirements of environmental management, capacity building, environmental awards, environmental publications, scholarships and grants. Also certain donations to the Trust Fund shall be applied specifically and reserved only for prizes and awards for exemplary services to the environment upon recommendation by the Board (Part III section 24(4,5)).

(e) National Environmental Restoration Fund

The source of funds for this Fund include proportion of fees or deposit bonds as may be determined by the Authority from time to time or donations or levies from industries and other project proponents as a contribution towards the Restoration Fund (s.25(2)). The Fund shall act as supplementary insurance for the mitigation of environmental degradation where the perpetrator is not identifiable or where exceptional circumstances require the Authority to intervene towards the control or mitigation of environmental degradation. (s. 25(4)).

(f) Provincial and District Environmental Committees

The Minister is empowered to by notice in the Gazette appoint District and Provincial Environment Committees of the Authority in respect of every district and province respectively (s. 29(1))**.** The Committees are responsible for the proper management of the environment within the province or district in respect of which they are appointed and perform such additional functions as are prescribed by the Act or as may, from time to time, be assigned by the Minister by notice in the Gazette (s.30).

(g) Public Complaints Committee

The Act also establishes the Public Complaints Committee under section 31. The functions of the Committee are to investigate any allegations or complaints against any person or against the Authority in relation to the conditions of the environment in Kenya; on its own motion investigate, any suspected case of environmental degradation, and make report of its findings together with its recommendations thereon to the Council; to prepare and submit to the Council, periodic reports of its activities which report shall form part of the annual report on the state of the environment under section 9(3); and to perform such other functions and exercise such powers a may be assigned to it by the Council.

The Functions of the Committee are**:** to recommend methods for building national awareness through environmental education on the importance of sustainable use of the environment and natural resources for national development; set out operational guidelines for the planning and management of the environment and natural resources; identify actual or likely problems as may affect the natural resources and the broader environment context in which they exist; identify and appraise trends in the development of urban and rural settlements, their impacts on the environment, and strategies for the amelioration of their negative impacts; propose guidelines for

the integration of standards of environmental protection into development planning and management (s.38).

(h) Technical Committee on Environmental Impact Assessment

The Authority may set up a technical advisory committee to advise it on environmental impact assessment related reports and the Director-General shall prescribe terms of reference and rules of procedure for the technical advisory committee.

(i) The Act also establishes a **Standard and Enforcement Review Committee** to be a committee of the Authority. The functions of the Committee are to: analyze and submit to the Director- General conditions for discharge of effluents into the environment; identify and recommend to the Authority areas of research on the effects of water pollution on the environment, human beings, flora and fauna; advise the Authority to carry out investigations of actual or suspected water pollution including the collection of data and recommend to the Director-General works necessary for the treatment of effluents before being discharged into the water.(s.71).

(j) Inspectors

Their functions are: to monitor compliance with the environmental standards established under the Act; to monitor the activities of other sector-specific environmental inspectorates; monitor the pattern of use of environmental resources; conduct environmental audits; and perform such other functions as may be required under the Act or under the Notice appointing them (s.117(2)).

(k) National Environmental Tribunal

It is established under s. 126. The Tribunal is vested with the mandate to entertain appeals made to it in writing by any party or a referral made to it by the Authority on any matter relating to this Act and to inquire into the matter and make an award, give directions, make orders or make decisions thereon, and every award, direction order or decision made shall be notified by the Tribunal to the parties concerned.

The Tribunal is not bound by the rules of evidence as set out in Evidence Act. The Tribunal shall sit at such times and in such places as it may appoint. The proceedings of the Tribunal are open to the public save where the Tribunal, for good cause, otherwise directs and the Tribunal shall regulate its proceedings as it deems fit (s. 126).

A person may appeal to the Tribunal for a refusal to grant a licence or for the transfer of his licence under this Act or regulations; the revocation, suspension or variation of his licence, the imposition of any condition, limitation or restriction on his licence; the amount of money which he is required to pay as a fee and the imposition against him of an environmental restoration order or environmental improvement order (s. 129).

(l) **The High Court** handles appeals from the National Environmental Tribunal (s.130).

(m) The Act establishes the **National Environment Action Plan Committee**; which among other things, is vested with powers to propose guidelines for the integration of standards of environmental protection into development planning and management; identify and recommend policy and legislative approaches for preventing, controlling or mitigating specific as well as general adverse impacts on the environment (s. 38).

The proliferation of the institution charged with environmental responsibilities is supposedly, meant to open participatory avenues at each and every level beginning with the grass-root level up to national level. This is also the spirit of the EAC Protocol.

(iii) Protection and Conservation of Environment

(a) Protection of Rivers, Lakes and Wetlands: The Act prohibits the following acts without a written consent of the Director General: erection, reconstruction, placing, altering, extending, removing or demolishing any structure or part of any structure in, or under a river, lake or wetland; directing or blocking any river, lake or wetland from its natural and normal course; depositing any substance in a lake, river or wetland or in, on, or under its bed, if that substance would or is likely to have adverse environmental effects on the river, lake or wetland and excavate, drill, tunnel, or disturb the river, lake or wetland (s.42).

(b) Protection of Hillsides Mountains: The Authority, in consultation with the relevant lead agencies, shall develop, issue and implement regulations, procedures, guidelines and measures for the sustainable use of hillsides, top mountain areas and forests and such regulations, guidelines, procedures and measures shall control the harvesting of forests and any natural resources located in or on a hillside, hill top or mountain area so as to protect catchment areas, prevent soil erosion and regulate human settlement (s.44).

(c) Protection of Ozone Layer

The Authority shall, in consultation with the relevant lead agencies, issue guidelines and institute programmes concerning the controlling of activities and practices likely to lead to the degradation of the ozone layer and the stratosphere (s.56(2)).

(iv) Environmental Impact Assessment

According to the Act, certain development activities require the approval of the Director-General before they are undertaken (Second Schedule to the Act: EIA is required for roads including all major roads; all roads in scenic, wooded or mountainous areas and wetlands). Such approval will not be granted in the absence of an environmental impact assessment EIA (s.58).

Upon receiving an EIA study, NEMA is mandated to publish a notice describing the project, stating where the EIA study, evaluation or review report may be inspected and a time limit for the submission of public comments on the study, evaluation or report. Interested persons must be afforded a reasonable opportunity to submit comments on the EIA (s.59-60).

(v) Environmental Audit

In addition, EMCA empowers NEMA to carry out environmental audits of all activities that are likely to have significant effects on the environment. To facilitate such audits, EMCA empowers “environmental inspectors” to enter any land or premises with a view to establishing how far the activities carried out thereon conform to the EIA studies issued in respect of such land or premises (s. 68).

(vi) Water Pollution and Air Quality Standards

Any person who discharges or applies any poison, toxic, other pollutants or permits any person to dump or discharge such matter into the aquatic environment in contravention of water pollution control standards; shall be guilty of an offence and liable to imprisonment for a term not exceeding

two years or to a fine not exceeding one million shillings or to both such imprisonment and fine (s.72).

(vii) Emission by Motor Vehicles

No owner or operator of a motor vehicle, train, aircraft or other similar conveyance shall operate it in such a manner as to cause air pollution in contravention of the established emission standards (s.82).

(viii) Discharge of Hazardous Substances

During road construction, the Act prohibits discharging any hazardous substance, chemical, oil or mixture containing oil into any waters or any other segments of the environment (s.93).

(ix) Standards for Noises

Emission of noise in excess of the standard established under the Act is an offence (s.102). Authority may on request temporary permit not exceeding three months, allowing emission of noise in excess of establishment standards for such activities as fireworks, demolitions, firing ranges and specific heavy industry on such terms and conditions the Authority may determine (s.103).

(ix) Environmental Restoration Orders

The Authority may issue and serve on any person in respect of any matter relating to the management of the environment an environmental restoration order, require the person on whom it has served to restore the environment as near as it may be to the state in which it was before the taking of the action which is the subject of the order and or prevent the person on whom it is served from taking any action which would or is reasonably likely to cause harm to the environment.(s. 108). One can appeal against such order. (s.109 g).

(x) Environmental Offences

Several offences are created by the Act, such as, failing to prepare an environmental impact assessment report in accordance with the requirements of the Act, fraudulently making false statements in an environmental impact assessment report; contravening any environmental standard prescribed under the Act; discharging any dangerous materials, substances, oil, oil mixtures into land, water, air, or aquatic environment and polluting the environment (ss 137-142).

It is not in dispute that this Act, to a great extent also prescribes the environmental standards for compliance by all actors in the road. These standards are complimented by the provisions on environmental guidelines as reviewed later in this Working Paper.

4.3 RWANDA

4.3.1 Organic Law on Environment

The Rwandan framework legislation is the Organic Law (NO. 04/2005 of 08/04/2005). Under this law, every person has the duty to protect, conserve and promote environment. The State has a responsibility of protecting, conserving and promoting the environment. This law like the others reviewed before alludes to a number of principles advocated by Rwanda Policy.

(i) General Principles

The Act contains specific environmental doctrines such as sustainable development which is defined as an effective method of using the environment with an aim of exploiting it to support the

present and plan for future generations. Every person in Rwanda has a fundamental right to live in a healthy and balanced environment. He or she also has the obligation to contribute individually or collectively to the conservation of natural heritage, historical and socio-cultural activities (Article 6). Laws and regulations in application shall guarantee the right to everyone to a healthy environment and shall ensure equal opportunities within ecosystems and between the urban and rural areas (Article 41).

The precaution principle is important so as to protect or reduce the disastrous consequences on environment (Article 7). So is the Polluter Pays Principle: Every person who demonstrates behaviour or activities that cause or may cause adverse effects on environment is punished or is ordered to make restitution (Article 7(3)). And every person has the right to be informed of the state of environment and to take part in the decision taking strategies aimed at protecting the environment (Article 7(4)).

(ii) Institutions Established

- The **Lead Ministry** is the Ministry responsible for environment. Like her counterparts, Rwanda also, via this law has established environmental institutions including one which is equivalent to NEMA (in Uganda and Kenya) and NEMC in Tanzania. This is the **Rwanda Environment Management Authority** abbreviated in English as (REMA), for implementation of the organic law (Article 65(1). There is also the **National Fund for Environment in Rwanda**, abbreviated as "FONERWA" in French, which is responsible for soliciting and managing financial resources. (Article 66(2)).
- Rwanda has established vehicle emission testing centres to among other things deal with vehicle emissions.
- Finally, there are committees responsible for conservation and protecting the environment at the Provincial, City of Kigali, and District, Town, Municipality, Sector and the Cell levels (Article 66).

(iii) EIA

Public or private construction works such as the construction of roads, dams are subject to environmental impact assessment (Article 30). Moreover, every government project or private individual activities can not be permitted to operate if they are contrary to their plan and they should aim at considering the strategies of conservation of environment as provided for by law (Article 31). Further, every project shall be subjected to environmental impact assessment, before obtaining authorisation for its implementation. This applies to programmes and policies that may affect the environment. An order of the Minister having environment in his or her attribution shall determine the list of projects mentioned in this organic law (Article 67). Every environmental impact assessment shall be approved by the Rwanda Environmental Management Authority or any other person given a written authorization by the Authority (Article 69).

(iv) Procedure of EIA

For the purpose of EIA guidelines in Rwanda, environmental impacts are divided in three categories:

- Category 1 (Impact level 1): Full EIA not required. REMA advises on the appropriate environmental management measures (plan);
- Category 2 (Impact level 2) :): Projects under this category are screened to determine whether or not a full EIA is needed. In this connection, REMA provides the developer with clear indication of

the additional information required. Once this information is received, REMA will determine whether or not a full EIA of the project is needed;

- Category 3 (Impact level 3): Full EIA is required. Projects in this category include; urban development, Construction and rehabilitation of trunk roads (transportation)...

(v) The Procedure of EIA

The procedure closely follows, the procedures discussed earlier. In short it involves the following stages: Public involvement; Scoping; Screening; Impact analysis; Mitigation measures; Environmental statement; Review; Decision making; and Implementation and follow up.

(vi) Incentives

Any activity which aims at controlling soil erosion and drought, or which aims at aforestation and forestry, using renewable energy in a sustainable manner, using modern cooking stoves and any other means that can be used to protect forestry, may receive support from the National Fund for Environment (Article 71).

The National Fund for Environment may also grant support to public services, associations and individuals in case they invest or put in place campaigns or carry out activities intended to fight against causes of pollution or support existing installations so as to match with the environmental quality standards, in accordance with instructions of competent authorities(Article 72).

(vii) Offences

The Act Creates a wide range of offences. Any one or association that does not carry out environmental impact assessment prior to launching any project that may have harmful effects on the environment is punished by suspension of his or her activities and closure of his or her association and without prejudice to be ordered to rehabilitate the damaged property, the environment, people and the property (Article 95) etc. Rwanda has a special environment enforcement unit which works closely with the police.

4.4 TANZANIA

4.4.1 Environmental Management Act, 2004

(i) General principles

The Act states that; every person living in Tanzania shall have a right to clean, safe and healthy environment; gives right to bring an action on environment for act or omission which is likely to cause harm to human health or the environment; restates the following principles of environment and sustainable development: the precautionary principle; polluter pays principle; the principle of eco-system integrity; the principle of public participation in the development policies, plans and processes for the management of the environment; the principal of access to justice; the principle of inter-generational equity and intra generational equity; the principle of international co-operation in management of environmental resources shared by two or more states(s.4and 5).

(ii) Institutions Established by the Act

(a) National Environmental Advisory Committee

This Committee is an advisory body to the Minister on matters relating the protection and management of the environment, restocking and limitation of stock, matter relating to watering, grazing, de pasturing and moving stock and degradation of the environment. Also it is entrusted to review and advise on any environmental standards, guidelines and regulations and to receive and deliberate reports from sector ministries on the protection and management of the environment (ss.11-12

(b) Minister Responsible for Environment

The Minister shall be overall responsible for matters relating to environment and shall in that respect be responsible for articulation of policy guidelines necessary for the promotion, protection and sustainable management of environment in Tanzania (s. 13).

(c) Director of Environment

The Director is tasked with coordination of various environment management activities, advise the Government on legislative and other measures for the management of the environment, advise the Government on international environmental agreements to which Tanzania should be a member or withdraw its membership, prepare and issue a report on the state of the environment in Tanzania and to coordinate issues relating to articulation and implementation of the National Environmental Policy(ss. 14-15).

(d) National Environment Management Council (NEMC)

It is a body corporate entrusted to undertake enforcement, compliance, review and monitoring of environmental impact assessment and in that regard, shall facilitate public participation in environmental decision making, exercise general supervision and coordination over all matters relating to the environment assigned to the Council, under the EMA or any other written law (ss. 16-29).

(e) Sector Ministries: with responsibility for ensuring compliance by the sector Ministry with the requirements under EMA (ss 30-33).

(f) Regional Secretariat – for coordination of all advise on environmental management in their respective regions and liaison with the Director of Environment and the Director-General on the implementation and enforcement of EMA (ss 34-35).

(g) Local Government Authorities*:* with supervision, awareness creation, advisory, policy review and enforcement powers within a particular local area.(s 36).
(h) Other institutions not mentioned are: the Environmental Appeals Tribunal, the High Court, the Environment Trust Fund and Environmental Inspectorate.

(i) Environmental Appeals Tribunal: with jurisdiction to entertain appeals from decisions of the Minister (for environment) or decision or restrictions imposed under the Act. Inquiries with NEMC show that Tanzania's Environmental Appeals Tribunal though legislatively established, has not commenced business to date. Other Member States such as Kenya, Uganda and Rwanda have similar quasi-judicial bodies in their statutes.

(iii) Environmental Impact Assessment

The Environment Management Act (EMA) of 2004 and the EIA and Audit Regulations 2008, make public participation and consultation a pre-requisite for all development projects. EIA for programs is guided by SEA Regulations 2005.

The Act obliges any person, being a proponent or a developer of a project or undertaking of a type specified in the Third Schedule to the Act, to which environmental impact assessment is required to be made by the law governing such project or undertaking or in the absence of such law, by the regulations made by the Minister, to undertake or cause to be undertaken, at his own cost, an environmental impact assessment study (s. 81 of the Act)

(iv) Procedure of Environmental Impact Assessment

(a) Environmental Assessment should be made as early as a project is conceived and continued through the project lifetime. Where EIA is mandatory, the EIA process involves the following stages:

(i) Environmental registration of the project with NEMC.
(ii) Environmental screening of the project by NEMC, with a legal time frame of 45 days within which a screening decision must be made.
(iii) Scoping and preparation of terms of reference for the EIA study by the proponent's environmental consultant and submission of the same for approval by NEMC.
(iv) Review and approval of the TOR by NEMC; approval/disapproval to be communicated within 14 days.
(v) Conducting the EIA study and preparation of environmental impact statement (EIS), and submitting it to NEMC for review.
(vi) Review of the EIS by NEMC and making approval/recommendations within 60 days.
(vii) Approval consideration by the Minister should take up to 30 days, within which the Minister shall issue or decline to issue an EIA certificate.
(viii) When approval is granted, monitoring and audit exercises follow.
(ix) If work does not start within 3 years after the EIA certificate has been issued, a fresh EIA study is called for should the proponent wish to go ahead with the project after that time-frame.

4.4.2 Roads Act 2007

The Act was enacted in 2007 to replace the old colonial legislation titled the Highways Act, 1932. In terms of environmental management this Act states in section 30 that the road authority entrusted with the duties of developing, managing and maintaining the public roads under its jurisdiction shall comply with the prescribed guidelines, regulations or any other written law relating to environmental protection and waste disposal. The Act, in a nutshell, enjoins all road authorities to comply with environmental laws and guidelines, when executing road projects under their jurisdiction.

(i) Environmental institutions under the Act

(a) Department of Safety and Environment

Since the Ministry of Works is responsible for the enforcement of the Act, the Ministry was consequently established this Department at the Ministry level. The Department is charged with road sector environmental policies and strategies, apart from supervision, guidance, monitoring, follow-up and reporting to the environmental authorities established under the EMA 2004.

(b) Road Authorities

Road authorities under the Act, are responsible for planning and executing road projects and maintenance of roads under their jurisdiction. There are two categories of road authorities. The first is the Tanzania National Roads Agency (TANROADS) established under the Executive Agencies Act 1997. TANROADS is responsible for roads classified as trunk and regional roads and it carries its responsibility via regional offices.

The second road authority is the Prime Minister's Office – Regional administration and Local Governments. This authority is decentralized into city, municipal and town councils; township and village authorities plus other relevant authorities responsible for private roads.

Each one of these road authorities is responsible for the overall supervision and coordination of environmental management of road projects under its jurisdiction in accordance with EMA 2004, the Roads Act 2007 and the regulations made under the two laws or any other laws on environmental matters.

4.5 UGANDA

4.5.1 National Environmental Act, Cap.153

Uganda is noted as the first EA country to enact framework legislation on environment protection that is the National Environmental Act, Cap.153 of Uganda, which was enacted in 1995.

(i) General principles

The Act recapitulates all the general principles contained in the Policy partly as follows: to assure all people living in the country the fundamental right to an environment adequate for their health and well-being; to encourage the maximum participation by the people of Uganda in the development of policies, plans and processes for the management of the environment; to use and conserve the environment and natural resources of Uganda equitably and for the benefit of both present and future generations, taking into account the rate of population growth and the productivity of the available resources; to conserve the cultural heritage and use the environment and natural resources of Uganda for the benefit of both present and future generations; to establish adequate environmental protection standards and to monitor changes in environmental quality; to require prior environmental assessments of proposed projects which may significantly affect the environment or

use of natural resources; to ensure that the true and total costs of environmental pollution are borne by the polluter; to promote international cooperation between Uganda and other states in the field of the environment.(s.2).

(ii) Institutions Established by the Act:
Like her counterparts (Tanzania and Kenya); the Act also establishes the following institutions:

(a) National Environment Management Authority (NEMA)
As the principal agency responsible for supervising, coordinating and monitoring all aspects of the environment, including the review of environmental impact assessments carried out for various projects. The Act empowers NEMA, in consultation with lead agencies, to issue guidelines and prescribe measures and standards for the management and conservation of natural resources and the Environment. (ss. 4-6). To this effect, NEMA prepared Guidelines for EIA (1997) which define the roles of the different stakeholders in the EIA process. Section 19 of the Act imposes an obligation on all developers to carry out EIA for their projects that are likely to have adverse impacts on the environment. NEMA like Rwanda has established a special unit to oversee the enforcement of the Act.

(b) Lead Agency
"Lead agency" is defined in the Act to mean any Ministry, department, parastatal agency, local government system or public officer in which or in whom any law vests functions of control or management of any segment of the environment. (s.1).

(c) Policy Committee on the Environment
It is established to provide policy guidelines and to formulate and coordinate environmental policies for the Authority.(s. 7).

(d) District Environment committee
They are established in each district to coordinate the activities of the district councils relating to the management of the environment and natural resources; to ensure that environmental concerns are integrated in all plans and projects approved by the district councils.(s. 14).

(e) Local Environment Committee
It is established at local level to monitor all activities within its local jurisdiction to ensure that such activities do not have any significant impact on the environment; to report any events or activities which have or are likely to have significant impacts on the environment to the district environment officer, or to the appropriate executive committee, local council or such other person as the district council may direct.(s.16).

(iii) Environmental Impact Assessment (EIA)
According to the Act, an environmental impact assessment shall be undertaken by the developer where the lead agency, in consultation with the executive director, is of the view that the project: may have an impact on the environment; is likely to have a significant impact on the environment; or will have a significant impact on the environment. (s. 19). The procedure for carrying out an EIA is fully set out in the Act and the Environmental Impact Assessment Regulations 1998, No. 13 of 1998. Generally, the Uganda legislation being a pioneer in this area lays a strong foundation for the environmental laws enacted recently in the Member States. It is in this context that there are more convergences than divergences in the said environmental legislation.

4.6 ZANZIBAR

Like all the Member States of the EAC, Zanzibar which is part of the United Republic of Tanzania has a specific environmental framework titled the Environmental Management for Sustainable Development Act, 1996. This Act, like the others reviewed above, is tailored along the lines of international legal instruments and the principles enshrined in the EAC Protocol on Environment and Natural Resources.

- **Environmental Principles**

Part II of the Act deals with general environmental obligations in which the purposes of the Act, and matters related to priority environmental public works; right to a clean and health environment and duty to maintain it; principles for sustainable development of renewable natural resources; and principles for conservation and recovery of non renewable natural resources are legislated for.

In terms of the purposes of the Act, every person has a duty to promote the purposes of the Act which include, inter alia to:-

- ensure the environmentally sound and healthy quality of life of the people of Zanzibar, present and future;
- promote the sustainable use of renewable natural resources; and
- strengthen the institutional capabilities for protecting the environment.

In section 5 the Act stipulates that in implementing the purposes of the Act, Government institutions in particular shall ensure that:-

- public works are implemented in an environmentally sound manner; and
- all public work plans include among their priorities works which are aimed at overall environmental protection and improvement.

More importantly, section 6 of the Act states that every person has a right to a clean and healthy environment and that every person has a duty to maintain and enhance that environment.

- **Administration**

In this part of the Act several environmental institutions are established or provided for. These include the Revolutionary Council on Environment, chaired by the Chief Minister or a Minister designated as the representative of the Chief Minister; the Department of Environment which shall be headed by a Director; the Ministry, Department or Commission of the Government under the Minister responsible for the environment or a corporate body constituted under section 17 of the Act; the Special Advisory Committee etc. The Act then goes on to specify the functions of each institution or organ. The pattern of power sharing among these organs or institutions closely resembles the patter observed in respect of institutions or organs in the other Member States.

- **Environmental Impact Assessment**

Like in other statutes reviewed above EIA is underscored in Part V of the Act. Under section 38 no person can undertake any activity which is likely to have a significant impact on the environment without an EIA certificate issued under the Act. Further, no licensing institution under the Act shall issue a licence, permit, certificate or other form of approval for an activity which is likely to have a significant impact on the environment unless an EIA certificate has been issued for the activity.

Generally and without undermining the other provisions of this Act it may safely be concluded that this Act, like its counterparts in the Member States bears more similarities than differences with environmental statutes applicable in those states.

Table 3: Environmental Law Framework Legislation: Convergences and Divergences

	BURUNDI	**KENYA**	**RWANDA**	**TANZANIA**	**UGANDA**	**ZANZIBAR**
Framework Legislation	√	√	√	√	√	√
EIA mandatory	×	√	√	√	√	√
National Environmental Management Authority/Agency	×	√	√	√	√	√
Road Authorities/Agency	×	√	×	√	√	√(to be established soon)
Lead Agency	×	√	√	√	√	√
Environmental Court	×	√	×	×	×	×
Roads Act	×	√	×	√	√	√
Environmental Inspectors	×	√	×	√	√	?
Road Fund	✓	√	√	√	√	√

Recommendations

1. Member States should enact road tailored environmental legislation to compliment the existing environmental laws enacted in all of the countries.
2. Member States should enact comprehensive environmental regulations to cover all areas relating to road activities as enumerated in the road sector regulations applicable in Tanzania.
3. Member States should adopt EAC environmental standards in areas where they are available.

5. SUBSIDIARY LEGISLATION

Consequent to the passage of the principal environmental legislation in each of the Member States as demonstrated by the previous review, the States have also enacted a wide range of subsidiary legislation under each one of those principal legislation. The subsidiary legislation compliments what is contained in the principal law.

5.1 BURUNDI

The Environment Code 2000 of Burundi empowers the President and the Minister to make regulations on various highlighted briefly in part 4.1.1. It is not clear whether all these regulations have been promulgated as envisaged in the principal law. Suffice it to say that presently there is a project in progress that is intended to make some of these regulations.

5.2 KENYA

5.2.1 Water Management Standards (Legal Notice 120: The Environmental Management Coordination (Water Quality) Regulations)

This Legal Notice on Water Quality provides that anyone who discharges effluent into the environment or public sewer shall be required to apply for effluent discharge license. The licence for discharge is Kshs 5,000 while annual licence fee for discharge into the environment is Kshs. 20,000 or Kshs 100,000 depending on the facility. Non compliance with the regulations attracts a fine not exceeding Kshs 500,000 and the polluter pay principle may apply depending on the court ruling.

5.2.2 Environmental Management and Coordination (Noise and Excessive Vibration pollution) (Control) Regulations, 2009 (Legal Notice 61)

These regulations prohibit any person to cause unreasonable, unnecessary or unusual noise which annoys, disturbs, injures or endangers the comfort, repose, health or safety of others and the environment. Part 11 section 6(1) provides that no person shall cause noise from any source which exceeds any sound level as set out in the First Schedule of the Regulations.

5.2.3 Environmental (Impact Assessment and Audit) Regulations of 2003

These Regulations, made under section 147 of the Environmental Management and Co-ordination Act, contain rules relative to procedures on environmental impact assessment in the sense of section 58 of the Act, rules on environmental impact audit and monitoring and strategic environmental assessment and they regulate some other matters, such as, appeals and registration of information regarding environmental impact assessment.

5.3 RWANDA

5.3.1 Environmental Impact Assessment Regulations (Ministerial Order N°004/2008 of 15/08/2008)

Ministerial Order N°004/2008 of 15/08/2008 establishes the list of works, activities and projects that have to undertake an environmental impact assessment, such as, construction and repair of international and national roads, large bridges, industries, factories, hydro dams and electrical lines...(sub article 1)

REMA, in collaboration with the Bureau of Standards for Rwanda is in the process of developing regulations and standards on the following areas: water quality, air quality noise quality standards and vehicle emission. This is done based on the Kigali Master Plan.

The standards on air and water pollution have been developed based on the EAC Standards. The Ministry of Health is currently working on the standards on drinking water.

5.4 TANZANIA

Pursuant to the passage of the Environmental Management Act 2004 a number of regulations have been passed by the Minister under the law. The critical ones include the following: the Air quality Standards regulations, Soil Quality Standards regulations, Water Quality Standards regulations, Hazardous Waste Management regulations, Noise and Vibrations regulations and the Environmental Inspectors regulations. All the mentioned regulations have full citations and are operational.

5.4.1 The Environmental (Registration of Environmental Experts) Regulations, 2005 (GN No. 348/2005)

The primary objective of these Regulations is to establish a system for registration of environmental experts; provide for a system of nurturing competence, knowledge, professional conduct, consistency, integrity and ethics in the carrying out of environmental impact studies and environmental audits; ensure that the conduct of environmental impact assessment or environmental audit is carried out in an independent, professional, objective and impartial manner's and to provide for a code of conduct, discipline and control of environmental experts.

The Regulations establish the Environmental Experts Advisory Committee to, among other things, advise NEMC on matters regarding registration, practice and conduct of environmental impact assessors and environmental auditors. Accordingly, no person can conduct an environmental assessment or carry out any activity relating to the conduct of an environmental impact study or environmental audit unless that person is duly certified and registered in accordance with the Regulations.

5.4.2 Environmental Management (Fees and Charges Regulations), 2008

Stipulates that "annual charges for environmental compliance monitoring and audit", are payable to the Council by all proponents whose projects have been issued with environmental certificates.

5.4.3 The Environmental Impact Assessment and Audit Regulations, 2005, GN 349/2005

In addition to the Act, these Regulations provide the corner stone for any environmental impact assessment of projects in Tanzania. The Regulations apply to all projects, undertakings and activities referred to in Part VI and the Third Schedule to the Act and the First Schedule to the Regulations. The First Schedule to these Regulations contains a list of projects for which EIA is mandatory and projects for which EIA may or may not be required. Any project in transport and infrastructure including construction expansion or rehabilitation of new trunk roads cannot be undertaken without an EIA. In short, the Regulations encompass the whole process of EIA and the prescribed forms under the law.

5.4.4 The Strategic Environment Assessment Regulations 2008 (GN No. 53/2008)

The Regulations intend, among other things, to provide a mechanism for mainstreaming of environmental issues and concerns into general planning and policy-making in order to make sure that all legislation, plans, strategies and programmes conform with environmental protection and

sustainable development requirements thereby enhancing environmentally sound planning in Tanzania.

5.4.5 Environmental Management (Fees and Charges) Regulations 2008 (GN 154/2008)

These Regulations prescribe the fees and charges payable for accessing or receiving the services rendered by NEMC under the Act and the regulations made thereunder.

5.4.6 The Road Sector Environmental Assessment and Management Regulations, 2009 (GN No. 337/2009)

These are Regulations tailored specifically to the road sector. They are made under the Roads Act, 2007. The Regulations apply to any road development or activity made under the Act. The purposes of the Regulations are: to provide specific requirements for the environmentally sound planning and management of road projects; to ensure that all road projects are implemented in environmentally friendly manner and reduce environmental socio impacts.

The Regulations emphasise that the minimum environmental quality standards for road works shall be such standards as may be prescribed by the Minister responsible for standards in relation to:- water quality; discharge of effluents; air quality; noise and vibration; hazardous materials; soil quality; control of noxious smells; light pollution; and land preservation In consequence the Regulations go on to impose statutory obligations on road contractors and supervising engineers in respect of the following matters:- land preservation; soil erosion control; preservation of trees and shrubbery; prevention of water pollution; prevention of air pollution; dust abatement; noise abatement; light abatement; preservation of historical and archaeological sites and items; use of pesticides toxic and hazardous substances; disposal of waste materials; preservation of underground, overland and overhead facilities; use of explosives etc. More importantly, the Regulations prescribe the procedure for carrying out environmental impact assessment of road projects. Therefore, these Regulations compliment those made under EMA which is a general law.

The Ministry of Works which is the custodian of the Roads Act 2007 and the Regulations made thereunder has excelled in issuing the following administrative documents to assist stakeholders in this sector:-

- Environmental Code of Practice for Road Works, 2009.
- Compensation and Resettlement Guidelines, 2009.
- Standard Specifications for Road Works, 2000.

In all these documents the focus is on environmentally sound designs and road construction.

5.5 UGANDA

5.5.1 The Environmental Impact Assessment Regulations, No. 13 of 1998

They regulate the procedure and process of conducting EIA in Uganda.

5.5.2 The National Environmental (Standards for Discharge of Effluent into Water or on Land) Regulations No. 5/1999

The Regulations stipulate various standards for discharge of effluent or waste water in form of maximum permissible limits.

5.5.3 The National Environmental (Management of Ozone Depleting Substances and Products) Regulations No. 63 of 2001

They are made under section 107 of NEMA, Cap 153; with the objective of ensuring the elimination of substances and products that deplete the ozone layer.

5.5.4 The National Environmental (Noise Standards and Control Regulations, 2003)

Prescribe the maximum permissible noise levels from a facility or activity to which a person may be exposed.

5.6 ZANZIBAR

In terms of environmental regulations, Zanzibar has not made significant developments in preparing them. However, Zanzibar is looking forward to the environmental standards which will be recommended by this study which will, in turn, provide a plat form for them to prepare the requisite regulations. In adopting environmental standards which are recommended by this study Zanzibar will have automatically have taken the advantage of harmonizing her regulations and standards with those of the Member States.

6. OTHER SECTORAL ENVIRONMENTAL LEGISLATION AND REGULATIONS

Besides the legislation reviewed above there are other equally important sectoral pieces of legislation and regulations which have a direct or indirect bearing on road sector activities as summarised in Table 4.

Table 4: Summary of Significant EAC States Legislation, Policies, and Environmental Regulations Pertaining to the Environment and Road Sector

TANZANIA

The Environmental (Registration of Environmental Experts) Regulations	(2005)	The to ensure that the conduct of environmental impact assessments or environmental audits is carried out in an independent, professional, objective and impartial manner and Regulation 14 prohibits any unregistered person from conducting environmental impact assessment of environmental audit or carrying out any activity relating to the conduct of environmental impact assessment or environmental audit.
The Environmental Impact Assessment and Audit Regulations	(2005)	The regulations provide the basis for undertaking Environmental Impact Assessment (EIA) and Environmental Audits for various development projects, including road construction projects; with significant environmental impacts.
The Land Act and The Land Regulations	(1999) (2001)	Compensation under Section 156 of the Land Act No. 4 of 1999-applies to non-governmental corporate bodies, institutions or groups of persons. NB**:** The Land Regulations of 2001, made under the Land Act No.4 of 1999, comprised of The Land (Compensation Claims) Regulations of 2001 and The Land (Assessment of Value for Compensation) Regulations of 2001
The Land Use Planning Act	(2007)	The Act provides for procedures for preparation, administration and establishes land use planning authorities and enforcement of land use plans.
The Occupational Health and Safety Act	(2003)	Deals with regulation on health, safety and welfare of workers in factories / workplaces including road construction project sites.
The Road Act	(2007)	A number of provisions for environmental planning and management.
Explosives Act (1963) and Explosives Regulation (1964)		Under the Act and its Regulations no person is allowed to acquire, posses and disposal of explosives without permission from the Commissioner of Mines. The regulation requires such a person to obtain a license from the Commissioner for Mines and such a person must hold a Blasting Certificate in order to carry out

		blasting operations
Forest Act No. 14	2002	Requires a proponent to undertake Environmental Impact Assessment for any development activities conducted within a Forest Reserve, Private Forest or Sensitive Forest.
Antiquities Act of 1964 (as amended in 1979) and the Antiquities Rules of 1991		The legislation requires permits to be obtained from the Director of Antiquities before undertaking any archaeological research. By this law, like in the case of EMA, the authorities have mandates to formulate by-laws to enhance environmental management within their district/urban authorities.
Wildlife Conservation Act	*2009*	*EIA is also crucial for every significant p*hysical development in a wildlife protected area, a wildlife management area, the buffer zone, migratory route or dispersal area (Section 35).
Water Resources Management Act	2009	Empowers the minister to prohibit human activities to be conducted beyond 60 metres from a water dam or reservoir or water source and creates offences in respect of water pollution
Grave Removal Act	1969	The Act provides for removal of graves from land required for public purposes(such as road construction); and envisages some compensation for reasonable expenses incurred in removal, transportation, reinstatement and re-interment of the grave or dead body
The Land Regulations (Assessment of Value of Land for Compensation)	2001	Provide the basis for assessment of market value of such land to ensure that fair and adequate compensation is paid.
Road Management Regulations	2009	Provide that no one can construct, maintain or alter a road access to or from public road without complying with the construction, maintenance and alteration standards approved by a road authority, such as TANROADS
The Mining Act	2010	Provides for prospecting of minerals, mining and dealing in minerals. It also provides for building materials including all forms of rock, stones, gravel, sand, clay, volcanic ash or cinder or other minerals used for the construction of buildings, roads, dams, and aerodromes or similar works. The legislation makes Environmental Impact Assessment mandatory as a precondition for granting the various categories of mining licences for the purposes above mentioned.
ZANZIBAR: The Environmental Management for Sustainable Development Act,	1996	Provides that no person shall undertake any activity which is likely to have a significant impact on the environment without an EIA certificate

Act No. 2		issued under this Act; has many provisions and principles similar to EMA (Tanzania Mainland)
The Road Act (Zanzibar); Act NO 7	2003	Prohibits excessive noise due to the design or condition of motor vehicle or the loading therefore, or to the condition or misuse of a silencer, or of a hooter, bell, or other warning device when any such vehicle is operated on a public road.

KENYA

Public Health Act (Cap. 242)		An Act of Parliament to make provision for securing maintaining health. section 115, of the Act states that no person/institution shall cause nuisance or condition liable to be injurious or dangerous to human health
Local Authority Act (Cap. 265)		- Under Section 166, every municipal council, town council or urban council may prohibit and control the development and use of land and buildings in the interest of the proper and orderly development of its area.
Waste Management Standards (Legal Notice 121: The Environmental Management Coordination (Waste Management) Regulations)		The notice states that no person shall engage in any activity likely to generate any hazardous waste without a valid Environmental Impact Assesment license issued by the National Environment Management Authority
Water Management Standards (Legal Notice 120)		Provides that anyone who discharges effluent into the environment or public sewer shall be required to apply for Effluent Discharge License. Non compliance with the regulations attracts a fine not exceeding Kshs 500,000 and the polluter pay principle may apply depending on the court ruling.
Environmental Management and Coordination (Noise and Excessive vibration pollution) (Control) Regulations, (Legal Notice 61)	2009	This regulation prohibits any person to cause unreasonable, unnecessary or unusual noise which annoys, disturbs, injures or endangers the comfort, repose, health or safety of others and the environment
Physical Planning Act,	1996	- Section 36 states that if in connection with development application a local authority is of the opinion that, the proposed activity will have injurious impact on the environment, the applicant shall be required to submit together

		with the application an Environmental Impact Assessment report.
Land Planning Act (Cap. 303)		An Act of Parliament to provide for the preparation and implementation of physical development plans and for connected purpose. Sec. 36, If in connection with a development application a local authority is of the opinion that proposals for industrial location, dumping sites, sewerage treatment, quarries or any other development activity will have injurious impact on the environment, the applicant shall be required to submit together with the application an environmental impact assessment report
Water Act	2002	Section 76 states that no person shall discharge any trade effluent from any trade premises into sewers of a licensee without the consent of the licensee upon application indicating the nature and composition of the effluent, maximum quantity anticipated, flow rate of the effluent and any other information deemed necessary.
Energy Act	2006	The Energy Act, 2006b, established the Energy Regulatory Commission (ERC) whose mandate is to regulate all functions and players in the Energy sector. One of the duties of the ERC is to ensure compliance with environmental, health and safety standards in the Energy Sector, as empowered by Section 98 of the Energy Act, 2006
Penal Code Act (Cap.63)		Section 191 of the penal code states that if any person or institution that voluntarily corrupts or foils water for public springs or reservoirs, rendering it less fit for its ordinary use is guilty of an offence
The Wildlife Conservation and Management Act, Cap 376		The Act provides that no person is allowed to use any aircraft, motor vehicle or mechanically propelled vessel to manage a drive, stampede or unduly disturb any protected animal or game animal.
The Lakes and Rivers Act Chapter 409 Laws of Kenya &Water Quality Regulations, 2006 (Legal notice No. 120)		This Act provides for protection of rivers, lakes and associated flora and fauna. The regulations have standards for discharge of effluent into the sewer and aquatic environment. While it is the responsibility of the sewerage service providers to regulate discharges into sewer lines based on the given specifications, NEMA regulates discharge of all effluent into the Aquatic environment.

The Forestry Services Act	2005	Section 43 subsection 1 provides that if mining, quarrying or any other activity carried out in the forest, shall, where activity concerned is likely to result in forest cover depletion, the person responsible shall undertake compulsory re-vegetation immediately upon the completion of the activity
Occupational Safety and Health Act	2007	The Act provides for the health, safety and welfare for employees at workplaces. This shall be considered at the construction, implementation and decommissioning phases of the project.
The Traffic Act Chapter 295 Laws of Kenya		The Act also prohibits encroachment on and damage to roads including land reserved for roads.
The Way leaves Act Cap 292		Section 3 of the Act states that the Government may carry any sewer, drain or pipeline into, through, over or under any lands whatsoever, but may not in so doing interfere with any existing building.
The Land Acquisition Act Chapter 295 Laws of Kenya		The Act provides for the compulsory or otherwise acquisition of land from private ownership for the benefit of the general public.

UGANDA

The National Environment (Wetlands, Riverbanks and Lake-Shore Management) Regulations, No.3	of 2000	- Part IV provides that a developer desiring to put up a project which may have a significant impact on a wetland, riverbank or lakeshore, is required to carry out an EIA
The National Environment (Waste Management Regulations),No.52	of 1999	Section 17 makes it mandatory for every person who operates a waste treatment plant / disposal site to take all necessary steps to prevent pollution from the site or plant, which include among others, instituting mitigation measures.
The Water Statute, No.9	of 1995	Section 22 provides for the suspension or variation of a water permit by the Executive Director where the water available in an area is or is likely to become insufficient in quality or quantity for the needs of the people using or seeking to use it. This may be done by notice in writing to the holder of the water permit for that area
The Wildlife Statute No. 14	1996	- Section 16 of this statute requires a developer desiring to undertake a project which may have a significant impact on any wildlife species or community to carry out an EIA in accordance with the National Environment Statute

		- Section 17 of the same statute obliges the Uganda Wildlife Authority in consultation with NEMA to carry out audits and monitor such projects that may have an impact on wildlife.
The Land Act	1998	Section 46 of the Act requires that any use of land should conform to Town and Country Planning Act and other laws. An EIA is therefore a useful tool to guarantee that the proposed land use does not contravene any law
The Investment Code, No. 18	of 1987	Section 19 of the code requires every investment licence to take necessary steps to ensure that the operation of its business enterprise does not cause any injury to the ecology or the environment.
The Wetlands Policy,	1995	This policy provides that all proposed modifications and restorations on wetlands be subjected to EIA and that damaged wetlands be rehabilitated in accordance with the findings of the EIA; also t all planned new wetland developments be subjected to EIA to determine the environmental controls
The Environment Impact Assessment Regulations, No. 13	of 1998	Require of the developer to prepare a project brief stating the nature of the project, its area of land and the kinds of activities that are to be undertaken during and after the development of the project. It is also required of the developer to carry out an evaluation or audit of the project to address issues set out in the EIA
Occupational Safety and Health Act, No 9	2006	over all purpose of safe guarding safety and health of all workers in all work places in Uganda; it spell out duties and obligations of both employers and employees in ensuring safety and health for all at work places.
National environment management policy	1994	The policy clearly states that an Environmental Impact Assessment should be conducted for any policy or project that is likely to have adverse impacts on the environment. This statement is further embedded in the National Environment Statute No. 4 of 1995 which makes EIA a legal requirement for eligible projects, policies and programmes
Energy policy -Still a draft (not sure if approved by cabinet)		Emphasize sustainable and environmentally benign development; At the sectoral level, the policy further strengthens the provisions of the National Environment Management Policy 1994 for environmental impact assessments.

Water Resources Policy	1995	provides that water supply projects should be assessed considering demographic, environmental and health aspects in accordance with stipulations for carrying out environmental impact assessment as given in the National Environment Management Policy 1994 and prepared in accordance with the NEMA guidelines and regulations.
Town and Country Planning Act	1964	This act provides for the orderly and progressive development of land including road plans in towns and other rural areas of the country

RWANDA

LAW/POLICY/INSTRUCTION	DATE	DESCRIPTION OF KEY POINTS
National Environment Policy	2003	Stipulates the utilization of natural resources and the protection and rational management of ecosystems for sustainable and fair development
National Strategy and Action Plan for the Conservation of Biodiversity	4/2003	Develops national strategies, plans or programs for the conservation and sustainable use of biological diversity; Integrates the conservation and sustainable use of biological diversity into relevant sectoral and cross-sectoral plans, programs and policies
National Land Policy	2/2004	Stipulates the appropriate land administration system as a key of land tenure security by providing the possibility of registering and transferring land and also the possibility of investment in land
Organic Law N° 04/2005 on protection, conservation and promotion of the environment	4/2005	Stipulates the modalities of protecting, safeguarding and promoting the environment
Presidential Order N° 54/01 on land commissions	10/2006	Determines the structure, responsibilities, functioning and composition of Land Commissions
Ministerial Order N° 01/2006 on land registers	9/2006	Determines the structure of land registers, responsibilities and functioning of the District Land Bureau
Land Expropriation Law N° 18/2007	04/2007	Determines the procedures relation to expropriation in the public interest
National Biosafety Law	2005	Provides the basic understanding upon which to plan and implement appropriate measures to enhance benefits from biotechnology while safeguarding against environmental and human health risks
Guidelines and Procedure for Environmental Impact Assessment (EIA)	2006	Developed to operationalize the provisions of the Organic Law to make EIA mandatory for all development projects

Law No. 16/2006	3/2006	Established REMA and delineated its organization, operation and responsibilities
National Policy of Decentralization	2006	Recreated districts, sectors and cells to include environmental officers within the district to help with planning and coordination of environmental activities in the districts. First time in Rwanda's history to have explicit environmental officers at sub -national levels.
Ministerial Directive of 9/8/2004	2004 Not yet a formal law	Bans the manufacture, importation, use and disposal of plastic bags/containers
National Wildlife Policy	2007 Not yet a formal law	Provides for mechanisms to protect wildlife, including regulatory instruments for hunting and collection of specimens. Wildlife outside protected areas is not explicitly provided for
Law N° 14/2003	5/2003	Stipulates quality control and commercialization of plant seeds
Instruction N° 01/2003	2003-Not yet formal law	Ban of cutting trees before maturity. Requires the permit of the district mayor
Instruction N° 0001/2004	2004-Not yet formal law	Ban of fuel wood use in making brick and tiles
Instruction N° 001/2006	2006-Not yet formal law	Authorizations required for cutting and transporting trees at maturity
National Forestry Policy	2004	Established Provincial Forest Commission to promote and oversee forestry activities that meet, on a sustainable basis, the population's needs for wood and other forest products and services.
Sector-specific Environmental Impact Assessment (EIA) Guidelines	2008	Developed to operationalize the provisions of the Organic Law for water resources and wetlands management; wastewater treatment; hydropower development; housing and roads infrastructure
Wetlands Policy	2004-Not yet formal law	Shelved pending detailed inventory and categorization of wetlands for production and protection
National Policy on Water and Sanitation	2004	Inventory and integrated management of water resources including watershed protection; expansion of water supply and sanitation

BURUNDI

(*Loi No. 1/010 Portant Code de l'Environnement de la République du Burundi*) Environmental Code	*du 30 Juin 2000*	- Addresses a wide variety of issues, ranging from environmental impact assessment, forest management, national park management, protection of soil and water, urban planning, and pollution.
Law No. 1/6 of 3 *Parc national (National Park) and Reserve naturelle (Nature Reserve*)	1980	Activities for which prior permission is necessary include entry for visitors, felling of trees (under supervision of a forester), and capture of animals for scientific purposes and fishing. NB: Road construction may lead to falling trees.
Réserve forestière (Forest Reserve)—relevant legislation is Law No. 1/02	1989	The objectives of the reserves are to maintain soil on mountains and slopes, to prevent erosion and to maintain the ecological equilibrium for the benefit of the population and for the conservation of plant or animal species recognized to be in danger of disappearance. NB: Road construction may lead to soil erosion
Monument naturel (Natural Monument)—relevant legislation is Law No. 1/6 of 3	1980	It applies to relatively small sites of particular scenic, tourism or biodiversity importance, such as waterfalls. Regulations are the same as for National Parks and Forest Reserves.
Land Code (*Code Foncier*)	1986	Several rights are granted to the State, under the categories of "public domain" which is inalienable, and "private domain" which can be conceded to private entities by public officials. Navigable water bodies, flood plains, and areas designated specifically for protection (e.g. national parks and forest reserves) are considered the State's private domain. However the State public domain is much broader, and includes "vacant" lands, land expropriated for reasons of public utility, confiscated lands, non-navigable water bodies (including marshes and wetlands), and forests (Article 231)

7. GENERAL CONVERGENCES AND DIVERGENCES IN ENVIRONMENTAL LAWS AND REGULATIONS IN EAC

Generally speaking, the three founding members of Tanzania, Kenya and Uganda differ less in their environmental legislation and policies. This is partly due to historical reasons and the MoU on environment which they signed in 1998. This similarity is also buttressed by Professor Okidi in the following tone;

> *In East Africa, Uganda was the first country to enact framework laws. Kenya borrowed heavily from Uganda, thanks to the initiative of Kenya's former Solicitor General, now Honourable Justice Benjamin Kubo. … that all EA countries followed somewhat similar paths in evolving their environmental laws.*

However, in spite of this similarity Kenya seems to have taken a lead in creating a special superior court to handle environmental cases. This has been made possible by establishing a Land and Environmental Law Division of the High Court of Kenya dedicated to environmental matters only. Unlike other civil cases the procedure for instituting cases in this Court has also been simplified, thus creating more opportunities for people to litigate on environmental matters.

As for Uganda some environmental NGOs in Uganda enjoy a high stature. They may take NEMA to court in order to change environmental law or policy. But they still remain its 'biggest customers' when it comes to being awarded consultancy contracts. This mutually supportive situation has not been replicated anywhere else in East Africa.

On the other hand, Tanzania stands as an exemplary model in passing an environmental legislation that is specifically addresses the road sector. This approach has elevated the stature of road environmental issues to the fore instead of leaving them to the general law on environment. The more focused approach in handling environmental matters related to the road sector will significantly contribute to the general populace and particularly the stakeholders in the road sector in understanding and appreciating the central role of carrying out road projects which are environmentally sound. Apparently, this development has not been replicated in the other Member States.

Apart from these attributes accredited to the three founding Member States, the review of environmental legislation in the other Member States of Burundi and Rwanda shows that all the Member States laws are primarily informed by international environmental instruments and the EAC Protocol in particular. This is evident from the replication of, among others, the objectives of the legislation, the environmental principles, the institutions established under each piece of legislation, the need to carry out EIA for all major projects including road projects, the management of various resources, such as, land, water, forests, wildlife, biodiversity, use of criminal sanctions etc.

Similarly, all the Member States have ratified a number of multilateral environmental agreements , such as, the Convention on Biological Diversity 1992; African Convention on the Conservation of Nature and Natural Resources; and Convention Concerning the Protection of the World Cultural and Natural Heritage.

Apart from the transport (road) sector, it was the finding of this review that all the Member States have endeavoured to pass environment and natural resources management legislation in all other vital sectors, like land, forest, and wildlife and water resources management. Pursuant to this

legislation road activities in these sectors require an EIA. These efforts are meant to achieve their commitment professed in the EAC Protocol on environment and natural resources. In spite of these positive developments the passage of a road tailored environmental legislation is important.

7.1 Specific Convergences

7.1.1 Setting of Environmental Standards

All standards as far as environmental matters are concerned (in relation to, among others, water quality; air quality; soil qualify; hazardous materials; noise vibration etc.) are set by the Minister responsible for environment through regulations promulgated under the Environmental Management Act. The position is similar to that of Uganda; as in Uganda the Minister responsible for or holding portfolio for environment has prescribed the environmental standards under the applicable set of Regulations. For example, standards for discharge of effluent or waste water are prescribed by the Minister under the National Environment (Standards for Discharge of Effluent into Water or on Land Regulations, 1999. Similarly, maximum permissible noise levels for accelerating vehicles are prescribed in Part VIII of the First Schedule to the National Environment (Noise Standards and Control) Regulations, 2003. In the same Schedule there also maximum permissible noise levels for the general environment; continuous or intermittent noise; places or areas of worship; mines and quarries etc. Standards on depletion of the ozone layer are prescribed by the Minister in charge of environment in the National Environment (Management of Ozone Depleting Substances and Products) Regulations 2001.

7.1.2 Inconsistency in Allocation and Discharge of Environmental Functions

There seems to be a big disparity among the Member States' legislation, first, on the establishment of the institutions charged with environmental functions. In some countries like Kenya and Tanzania the list of the institutions established under each country's national environmental legislation is fairly long compared to the other States. And, secondly, the distribution of functions among the various organs or institutions also varies from one Member State to the other. Creation of many institutions/organs may further create the problem of coordination and or duplication of functions amongst themselves. Unless these problems are properly addressed they may lead to inertia in the whole process of enforcement and administration of the law and the standards generally.

In Kenya, for example, certain development activities after an EIA has been performed require the approval of the Director – General, while in Tanzania such approval is usually given by the National Environmental Management Council, that is to say all EIA approvals (PERMITS) are issued by the Minister responsible for Environment. The task of NEMC is to review EIA statements and recommend to the Minister for the issuance of permits. Additionally, Uganda's framework law empowers NEMA – Uganda to, among other things, co-ordinate implementation of government policy and initiate legislative proposals, standards and guidelines on the environment. Similarly Kenya's framework law empowers NEMA-Kenya to carry out the same functions. However, in Tanzania, these functions are carried out by the office of the Director of Environment (DoE) established under section 14 of the Act. Creation of environmental institutions specifically for the road sector, as Tanzania has done under the Roads Act 2007, to work hand in hand with those established under the general environmental legal framework is probably the best approach in addressing environmental matters in the road sector.

Also, project developers/proponents; are required to submit ten copies of project brief (as it is called in Uganda) project report (in Tanzania) and Kenya; the procedure in Kenya, is a bit more

demanding as the proponent has to send 10 hard copies and 10 soft copies to the Authority. The requirement for extra ten soft copies is lacking in Tanzania and Uganda.

7.1.3 Levels in Development of Environmental Regulations Standards and Guidelines

The five Member States are at different levels in terms of the development of environmental regulations, standards and guidelines for the environment generally and the road sector in particular. In some countries the level is at an infant stage while in others it is at a fairly mature stage. For example, in Kenya and Burundi standards on pollution and discharge are still being developed. Notwithstanding this disparity, the emphasis should be on formulating standards and guidelines which speak to each other across the region with a hind sight of the Partner States' commitment under the EAC Protocol.

7.1.4 The Environmental Impact Assessment Process

Tanzania is the only country where the scoping report should indicate how the public was involved. The proponent/consultant should establish a list of interested and affected parties and also develop methods for notifying them about the proposal. Consultation with the public should be a two-way traffic whereby information about the proposal is disseminated, and useful local information and opinions received. The consultation process should record the community's fears, interests and aspirations so that these can be addressed in the EIA study. There is a need to adopt harmonized EIA procedures as developed by Eastern Africa Association for Impact Assessment (EAAIA)[3]

7.1.5 Harmonized Laws and Regulations

Generally speaking, the environmental laws applicable in the Partner States seem to be in harmony. There is also commonality in the areas for which regulations have been made. However, notable differences appear in the standards and guidelines promulgated in each of the Partner States. The review in Part 2.2 of this Working Paper will clearly bring out these differences and propose the remedial measures to be taken.

7.2 Conclusion

Part **7.1** has endeavoured to highlight areas of convergences and divergences in the environmental policies and legislation applicable in the Partner States. It was the general finding of this review that strenuous efforts have been taken by all the Partner States to make environmental policies and enact laws that are generally in conformity with the international environmental instruments which they have ratified or signed. It was observed that in making and passing the said policies and laws respectively the Partner States have also strived to achieve their commitments which is reposed in the EAC Protocol on Environment and Natural Resources. To this effect, the areas of convergences therefore, appeared to outnumber the areas of divergences.

As for the areas of divergences it is the general recommendation of this review that Partner States should revisit and revise their national policies and legislation including the regulations so that they are in harmony with the object of further achieving their commitment under the EAC Protocol. The harmonization of the policies and laws should go hand in hand with the harmonization of the environmental standards and guidelines recommended in other part of this Working Paper.

[3] http//www.uneca.org/eca programmes/documents/EIA book final sm pdf

Recommendation Towards Harmonization

- *Partner States should amend their existing laws to incorporate the recommendations above made and enact the missing regulations to provide comprehensive standards in road sector in the entire region.*
- *Environmental NGOs, pressure groups, community based organizations and other stakeholders should be fully involved in the harmonization process.*
- *The harmonization process should go hand in hand with the harmonization of the standards recommended below.*

REFERENCES

Akech J.M, **Background Paper for the Environment and Land Law Reports,** February 2006

Ecaat J, A Review of the Application of Environmental Impact Assessment (EIA) in Uganda: a Report Prepared for the United Nations Economic Commission for Africa, October 2004

Hobbs M and Knausenberger W, **Burundi Environmental Threats and Opportunities Assessment (ETOA); With Emphasis on Tropical Forests and Biodiversity Conservation,** Supplement to the 2003-2005 USAID/Burundi, March 2003

Kabudi P.J**, Precautionary Approach to Environmental Management (EIA, Environmental Audit, Monitoring and Precautionary Principle)**, A Paper presented during EA Judicial Colloquium, 10-15, 2007 in Nairobi Kenya

LEAT, Environmental Law Handbook for Businesses in Tanzania, August 2000
Maembe A, The Role of National Environment Management Council (NEMC)Tanzania; Paper presented during EA Judicial Colloquium, 10-15, 2007 in Nairobi Kenya

Mwinzi M, Overview of the National Framework Environmental Laws, A Paper presented during EA Judicial Colloquium, 10-15, 2007

National Environment Management Authority (NEMA), **National Profile to Assess the Chemicals Management Infrastructure in Uganda, November 2002**
NEMA (Uganda), Guide to the Practice of Environmental Law in Uganda: A Hand Book; 2004

Republic of Rwanda, **National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants 2007-2025**, Kigali, December 2006
Ringia D.W and Porter C.J, A paper entitled **Access to Environmental Information in Tanzania**, April 1999

The Government of Kenya, **National Assessment Report for the World Summit on Sustainable Development (RIO+10)** Johannesburg, South Africa; August-September 2002

Rugadya M, Land Reform: the Ugandan Experience, (Land Use and Villagisation Workshop), KIGALI20-21 SEPTEMBER 1999

School of Business, Economics and Law (UNIVERSITY OF GOTHENBURG), **Environment and Climate Change Analysis for Rwanda**, Göteborg April 28th 2008

UNDP, **Medium-Sized Project CAPACITY BUILDING FOR SUSTAINABLE LAND MANAGEMENT IN BURUNDI**, BUJUMBURA, April 2007

UNEP *et al*, **Towards Integrated Management of Coastal and Marine Resources in Kenya**, NEMA-Kenya, 2009

UNEP/UNDP/DUTCH; **Report on Joint Project on Environmental Law and Institutions in Africa, The East African sub-regional Project on Development and Harmonization of Environmental Laws** (Vol. 5), December 1999.

UNEP/GEF, Environmental Assessment in the WIO Region; An overview of the policy, legal, regulatory and institutional frameworks related to Environmental Impact Assessment in the WIO Region, Final Regional Report, 2010.

EAC: Meeting of the Working Groups on Environment and Natural Resources Management, Report of the Working Groups on Pollution, Terrestrial Ecosystems and Aquatic Ecosystems, 8th – 11 July, 2011, Kigali, Rwanda EAC/TF/2011.

Matrix of the Programme of Action (2011 – 2016) to implement the Nairobi Agreement on air Pollution.

Principal National Environmental Legislation

1. Portant Code de l' Environment 2000 (2000 Environment Code) (Burundi)
2. The Environmental Management and Co-ordination Act 1999 (Kenya)
3. The Organic Law on Environment (No. 04/2005) (Rwanda)
4. The Environmental Management Act, 2004 (Tanzania)
5. The National Environmental Act, Cap 153. (Uganda)
6. The Environmental Management for Sustainable Development Act, 1996 (Zanzibar)

FINAL REPORT

ANNEX B 2

HARMONISATION OF ENVIRONMENTAL GUIDELINES AND STANDARDS

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GLOSSARY AND ACRONYMS

ABS	Alkyl Benzene Sulfonate
Ag	Silver
Al	Aluminium,
As	Arsenic
Ba	Barium
BOD	Biological Oxygen Demand
Cd	Cadmium
Cl	Chlorides
CM	Massive Clay
CO	Carbon Monoxide
Co	Cobalt
COD	Chemical Oxygen Demand
Cr	Chromium VI
CRP	Compensation and Resettlement Plan
Cu	Copper
dBA	Unit in decibel for an A-weighted sound level (for quite sounds).
dBC	Unit in decibel for a C-weighted sound level
Decibel	A unit used to express the intensity of a sound wave
DSE	Department of Safety and Environment
E.coli	Escherichia coli
EAC	East Africa Community
EIA	Environmental Impact Assessment
EIR	Environmental Impact Review
EIS	Environmental Impact Statement
EMA	Environmental Management Act
EMC	Environmental Management Committee
EMP	Environmental Management Plan
F^-	Fluorides
FC	Faecal coliform
Fe	Iron
HC	Hydrocarbon
Hg	Mercury
IP	Impermeable
ISO	International Standards Organization
LCA	Life Cycle Assessment
LCP	Large Combustion Plants
LeqT	Equivalent sound levels
LSF	Loamy Fine Sand
Mn	Manganese
MO	Months
MOID	Ministry of Infrastructure Development
N.L	Not Limiting
n.m	not mentioned
n.o	not objectionable

NEMA	National Environmental Management Act
NEMC	National Environmental Management Council
Ni	Nickel
NO_3^-	Nitrates
NO_x	Nitrogen Oxide
Pb	Lead
pH	the measure of alkalinity and acidity
PM	Particulate Matter
PV	Permanganate value
REMA	Rwanda Environmental Management Authority
RSA	Road Safety Audit
S^-	Sulphides
Sc	Coarse Sand
SCL	Sandy Clay Loam
Se	Selenium
SEA	Strategic Environmental Assessment
Sf	Fine Sand
SiCs	Silty Clay Blocky
Sn	Tin
SO_4^-	Sulphate
SPM	Suspended Particulate Matters
TAC	Technical Advisory Committee
TKN	Total Kjeldahl Nitrogen
ToR	Terms of References
TP	Total Phosphorus
TSS	Total Suspended Solids
TZS	Tanzania Standards
V.P	Very Poor
WHC	Water Holding Capacity
WHO	World Health Organization
Zn	Zinc

EXECUTIVE SUMMARY

Introduction

Although roads are economically and socially beneficial to any nation, it has been noted that poorly planned roads and bad construction practices have adverse effects to human health and the environment. Negative environmental and socio-economic impacts resulting from road project development and management include: loss of biodiversity; land degradation; involuntary resettlement, unintended induced development; deforestation, pollution of air, water and soil; roads safety and human health. Therefore in the course of mitigating the environmental impacts emanating from the road project development one has to ensure that the road project planning, design, construction, operation and maintenance have to meet the environmental regulation and standards. An environmental standard is a policy guideline that regulates the effect of human activity upon the environment. Standards may specify a desired state (e.g. lake pH should be between 6.5 and 7.5) or limit alterations (e.g. no more than 50% of natural forest may be damaged). Environmental standards are a set of quality conditions that are adhered or maintained for a particular environmental component and function. The different environmental activities have different concerns and therefore different standards.

On the other hand the function of the Environmental Impact Assessment (EIA) process in the road project development is to identify the positive (beneficial) and negative (adverse) impacts of a proposed road project on the natural and human environment and then to formulate appropriate remedial/mitigation measures to avoid or minimize adverse negative impacts and to enhance beneficial impacts. The EIA process may help develop more environmentally friendly road projects by reducing negative environmental impacts through alternative approaches, design modifications, and remedial measures. The application of EIA to road construction, upgrading, improvements, rehabilitation, and maintenance and to transport operations is a preventive strategy.. It is against these backgrounds about the environmental standards and EIA guidelines which are very important tools for environmental management of road projects that it was necessary to harmonise the environmental regulations and standards for road sector in all member states of EAC given the fact that each state had its own standards and guidelines. This chapter presents the harmonisation of environmental standards and regulations for road sector in EAC.

Objectives and Methodology

The harmonization of the environmental regulations and standards component of assignment was guided by Terms of References (ToR) which had the following objectives

- Review existing environmental regulations and standards,
- Collect Stakeholder Views and Conduct Workshops,
- Facilitate Expert Group Meetings to Work on the Harmonization Process and
- Preparation of Detailed Guidelines and Manuals.

To achieve the above objectives the study assessed the road project in its Life Cycle which essentially includes: planning, feasibility, design, construction and operation and maintenance of roads. Activities that are undertaken during these stages have various environmental impacts implications. The harmonization of environmental regulations and standards therefore approached the sector in its LCA approach. The study was carried out in three phases, namely inception phase, detailed phase and phase 3 which is the preparation and production of detailed guidelines and manuals. In all these phases the study had adopted a broad approach which includes a desk study, interviews and focus group discussions, expert meetings and stakeholders meetings. The following

sections present the review findings, areas of convergence and divergence, harmonization of the environmental standards and regulations and the proposals for manuals and guidelines for environmental standards and EIA in EAC.

Review of Existing Environmental Standards and Guidelines in the EAC

a) Environmental Standards

Our review of the documents and various best practices else where, have found out that for the environmental regulations, the minimum environmental quality standards applicable to roads works are in relation to: water quality standards; discharge of effluent; air quality (including vehicle emission standards); noise standards; vibration standards; soil quality standards; control of noxious smells standards; light pollution standards; electromagnetic waves and microwaves; hazardous substances and materials; and any other environmental quality standards.

The review has found out that, with the exception of Burundi and Zanzibar, other countries within the community, namely Tanzania, Uganda, Kenya and Rwanda have environmental standards that these countries have developed for themselves. The point to note here is that there is no even a single country that has fulfilled the minimum environmental standards applicable to roads works as found out from the literature review. Burundi and Zanzibar adapt the standards and guidelines from the international standards. The detailed description of the available standard for each country in EAC in terms of what each standard includes and its numerical values is given in the study main report.

b) EIA Guidelines

Review of the documents and best practices elsewhere has identified six (6) steps to be followed while carrying out the EIA for the road projects. The identified steps are as follows; The Environmental Assessment Process, Project Planning and Pre-feasibility Phases, Feasibility Study and Preliminary Design Phases, Construction Phase – Supervision and Monitoring, Traffic Operations and Road Maintenance and Decommissioning. In all these phases/steps, the guidelines for Socio Economic and Cultural Impacts Assessments and Compensation and Resettlement are followed and adhered to. The detailed descriptions of these guidelines are given in the main report.

A summary of the available EIA guidelines across EAC member states is as follows:
With exception of Burundi, other EAC member states, namely Tanzania, Uganda, Kenya and Rwanda have EIA guidelines. While Tanzania, Kenya and Uganda have EIA guidelines specific to the road sector, Rwanda has EIA guidelines for any project. Though Tanzania and Uganda have EIA guidelines for road sector, the EIA guidelines however differ in terms of names. The EIA guideline for Tanzania is termed Road Sector Environmental Assessment and Management Guidelines, while the one in Uganda has been named Environmental Impact Assessment Guidelines for Road Projects. Rwanda uses different names interchangeably like EIA guidelines, EIA procedures and EIA Processes. In addition the study has reviewed the Trans-boundary Environmental Assessment Guidelines for Shared Ecosystems in East Africa (EA).

A brief description of EIA guidelines for each country in EAC is given below. It has however to be noted and taken into account that this description doesn't include Burundi and Zanzibar as they don't have any EIA guideline.

Tanzania

The EIA guidelines in Tanzania have been developed following its life cycle approach. The guidelines therefore follow the life cycle and the guidelines are detailed in chapter four.

Uganda

In Uganda the EIA guidelines follows the screening, environmental impact review, environmental impact assessment, review of EIR report and EIS. The detailed description of EIA guidelines for Uganda is in chapter four.

Kenya

EIA is a planning and management tool for proposed projects which is used to predict the environmental consequences or impacts of road development project with a view of recommending mitigation measures. EIA ensures that the potential adverse environmental impacts are foreseen and addressed at an early stage in the project planning and design. The possible environmental consequences of projects include ecological, economic, cultural, aesthetic, health and safety, social, and amenity impacts. The detailed description of EIA guidelines are in chapter four.

Rwanda

In Rwanda the EIA is guided by the National Policy on EIA. The Constitution of the Republic of Rwanda, adopted in June 2003, ensures the protection and sustainable management of environment and encourages rational use of natural resources. The steps followed are; Screening, Scoping and Terms of Reference, Environmental Impact Study and Report, Submission of EIA Report to the Authority, EIA Report Review and Decision-Making. The detailed description of EIA guidelines are in chapter four.

Trans-boundary Environmental Assessment Guidelines for Shared Ecosystems in East Africa

These guidelines provide procedures for conducting trans-boundary environment assessment in shared ecosystems in East Africa and the roles for the key stakeholders and players during the implementation of the Trans-boundary Environment Assessment process in the member states. The trans-boundary environment assessment will therefore help to define whether a proposed policy, project or activity will have significant positive or adverse trans-boundary impacts, determine whether the adverse impacts can be avoided or mitigated and recommend such measures as to prevent or reduce adverse impacts and or propose alternatives to the proposed policy, project or activity.

c) Strategic Environmental Assessment (SEA)

Apart from EIA, Tanzania, Uganda, Kenya and Rwanda all have Strategic Environmental Assessment (SEA). The concept of sustainable development requires EIA to be expanded beyond projects level. SEA is the assessment of impacts of policies, plans, programmes which are higher than the project level. It involves impacts identification and analysis of development programs or policies in order to establish potential cumulative effects on environment over the long-term. A bit of description of SEA is in chapter four of the main report.

Convergences and Divergences of Environmental Standards and EIA Guidelines

The study has established the areas of convergence and divergence for the environmental standards in EAC member states. The following section analyzes each environmental standard and the areas where there is convergence and divergence for the same across the community.

a) Water Quality Standards

With exception of Uganda and Burundi, other countries in EAC namely Tanzania, Kenya and Rwanda have water quality standards. While in Tanzania, the water quality standards are for drinking water and include microbiology, physical and chemical parameters, in Kenya water quality parameters are for six (6) categories namely Quality Standards for Sources of Domestic Water, Standards for Effluent Discharge into the environment, Standards for effluent Discharge into Public Sewers, Microbiological Quality Guidelines for Wastewater used in Irrigation, Standards for Irrigation Water, Quality Standards for Recreational waters. The standards for water quality therefore diverge in terms of definition, uses type pollutants and numerical values. The numerical values for water quality standards have detailed in the study main report. The convergence is that these countries are having water quality standards.

b) Discharge of effluent Standards

Only Tanzania, Uganda, Kenya and Rwanda have the standards for discharge of effluents into the environment. While the effluents for discharge in Uganda are discharge into land or water, in Tanzania and Kenya the standards apply to water bodies only. Moreover, Uganda and Tanzania it has been defined what it means by wastewater pollution while there is no such definition in Uganda. The divergence here is on definition and its application whether on only water bodies or both on water bodies and on land and on the type of pollutants. The definition of this terminology and their numerical values for discharge effluent are given in the study main report.

c) Air Quality Standards

It is only Tanzania and Rwanda that have air quality standards. Other countries in EAC, namely Uganda, Kenya and Burundi either do not have standards at all or they have standards in draft form. The country with draft form is Kenya while other countries don't have any. In Tanzania, the air quality standards are both for ambient air quality standards and stationary sources. In this category, there are also vehicles exhaust emissions standards. The areas that the study has identified to be divergent are on definition of the terminology, numerical values, type of pollutants and different categories of vehicle emission. Kenya on the other hand has the standards for fossil fuel emissions. It has the standards for petrol powered vehicle emission and diesel powered emission. The detailed descriptions of the air quality standards which also include vehicle emission standards are given the study main report.

d) Noise Standards

Four countries in EAC, namely Tanzania, Uganda, Kenya and Rwanda have established the standards for noise. Only one country, which is Kenya that has indicated to have the standards for both noise and excessive vibration, however the standards in the document is only for noise and nothing for excessive vibration though it has been mentioned in the standards. No country in EAC that has developed standards solely for vibration pollution though Tanzania has the draft form of the vibration standards. However, these countries have standards for noise. The area of divergence is on the definition of the noise pollution and also on the areas affected by the noise. While in Tanzania, the numerical values are for different land use categories; in Kenya it is named zones while Uganda there is mention of the facility. The other area for divergence is on the numerical values for zones, land use categories. The other area is on the definition of the time frame for day and night for the maximum noise level permitted. The detailed description of the noise and vibration pollution standards for different categories in different EAC is given in the study main report.

e) Vibration Standards

Our preliminary review has found out that there is no any country in the EAC that has established the standards for sub-sonic vibration though Tanzania has the standard in draft form. In the development of the environmental standards manual and guidelines, the study has adapted from best practices elsewhere but also using the ISO and WHO guidelines.

f) Soil Quality Standards

Three countries of EAC, namely Tanzania, Uganda and Rwanda have soil quality standards. The rest of the member states of Kenya, Burundi and Zanzibar don't have any standards for soil quality. While in Tanzania, the soil quality standards are for soil contaminants in agriculture and habitat. The standards limit the contaminants to the soil. In Uganda the standards are for management of soil quality mainly for the agricultural practice. The observation is that in Uganda, standards are not purely standards for soil quality but are soil properties. The soil parameters considered are for; Parameters for rain-fed agriculture, Parameters for irrigated agriculture, Parameters for wetland rice systems under natural flooding, parameters for wetland rice under irrigated systems and soils to be used only with conservation measures. The divergence here is that the way soil quality has been defined in Tanzania is different from Uganda. Moreover the types of pollutants and numerical values to be considered in two countries are different. The detailed descriptions of soil quality standards for different countries are given in the study main report.

g) Light Pollution Standards

Rwanda is the only country in EAC community with the standards for light pollution.

h) Electromagnetic Waves and Microwaves

Our review has found out that there is no any country in the EAC that has established the standards for electromagnetic waves and microwaves. In the development of the environmental standards manual and guidelines, the study has adapted from best practices elsewhere but also using the ISO and WHO guidelines.

i) Hazardous Substances and Materials

The study has preliminarily found out that there is no any country in EAC that has explicitly established the standards for hazardous substance though there is only one country that has established the standards for ionizing radiation substance. The country is Tanzania. Therefore in the development of the environmental standards manual and guidelines, the study has adapted from Tanzania, best practices elsewhere and also using the ISO and WHO guidelines.

EIA Guidelines

Our review has found out that EIA guidelines for Tanzania, Kenya and Uganda are more elaborate and focused since they all focus only on EIA guidelines for Road Sector. The convergent point is that the EIA guidelines for Tanzania, Uganda, Kenya and Rwanda include policy and legal frameworks and institutional framework of the respective countries. Two countries in EAC namely, Rwanda and Uganda term Stakeholders as the same as institutional set up for Tanzania and Kenya. This needs to be harmonised. On the other hand, the EIA guidelines for shared ecosystems in EAC has the same processes as EIA for Tanzania, Kenya and Uganda, namely Preparation of Project Brief, Screening and Scoping, Trans-boundary Environmental Assessment Study, Review of the Environmental Assessment Statement, The Public Hearing, Decision Making and Monitoring, Auditing and Enforcement

The divergent point observed is that the EIA processes for different countries are different. While the EIA process in Tanzania and Uganda are in accordance with different phases of the road projects, the EIA process in Rwanda and Kenya are general and lumped. Moreover the EIA processes for Uganda also include the guideline for Socio economic and Cultural Impacts Assessments, Compensation and Resettlement. Like it has been indicated the EIA process for Rwanda and Kenya are not as elaborate as the ones for Tanzania and Uganda as for the latter they are general. In addition, Uganda has established the environmental police unit to enforce the environmental standards and regulations. The EIA guidelines for shared ecosystems in EA for the activities to be subjected to the Guidelines for Trans-boundary Environment Assessment are to include those that are implemented in the geographical area of the trans-boundary ecosystem. These shall include; policies, plans, programs or projects in one Member State or activities out of character with their surroundings involving major changes in land use and which are likely to cause trans-boundary impacts in neighbouring countries. Such policies, plans, programs or activities could involve transportation and communication, mining, exploration for petroleum, hydropower stations, tourism, large scale agricultural projects, irrigation and diversion of water courses as well as large weed and pest control programs

Harmonisation and Improvement of Environmental Standards and EIA Guidelines

Our study has revealed that three aspects of harmonisation have been looked at, namely;

(i) Those that have already been harmonised by EAC
(ii) Those that this study has harmonised
(iii) The ones that have been developed

a) Standards that have already been harmonised by EAC in its Catalogue of East African Standards

The study has found out that, EAC has harmonized some of the environmental standards in its Catalogue of East African Standards of 2010. The following environmental standards have been harmonised by EAC and they have not been considered for harmonisation in this study. They will have to be referred to, anytime when they are to be applied to the road sector. The standards are;

- EAC 13.040 Air quality
- EAC 13.040.01 Air quality in general
- EAC 13.040.20 Ambient atmosphere
- EAC 13.040.40 Stationary source emissions
- EAC 13.040.50 Transport exhaust emission
- EAC 13.040.90 Other Standards related to air quality
- EAC 13.060.01 Water Quality in general

The study has adopted these standards

b) Harmonised Standards from this Study

The study has harmonised three environmental standards. The standards are, noise standards, soil quality standards and effluents and receiving waters. It appears that there some slight difference in terms of definition/terminology of the standards across different EAC countries. There was therefore the need to harmonise the definition/terminology for different standards. Another general aspect is

that there was the need to harmonise the scope of standards for different countries within EAC. The detailed descriptions of these standards are in the study main report.

Noise Standards

The harmonisation for noise standards has looked into classification of land use categories, standards noise values for different types of land use categories (LAeq or not), Noise standards for areas facing roads and Noise emission standards for construction equipment and small and large vehicles. For classification of land use categories, harmonisation was on class of land use, category of land use and its description. For Standard noise values for different types of land use categories (LAeq or not), harmonisation looked into area and standards value (dBA) both for day and night times. For noise standards for areas facing roads, the harmonisation is being sought in the class of area and also standards value (dBA) both for day and night times. For noise emission standards for construction equipment and small and large vehicles the harmonisation is on the type of equipment/vehicle and the noise limit (dBA).

Soil Quality Standards

For soil quality standards the harmonisation looked into the following areas; Contaminant limits for volatile organic compounds, contaminant limits for heavy metals Contaminant limits for pesticides and Contaminants limits for other chemicals. In all these areas the harmonisation was mainly on the parameters, their upper limits in mg/kg and their test methods.

c) Standards that have been developed

This study developed two environmental standards, namely vibration and electromagnetic waves standards. For vibration, the aspects of the standards that have been looked at are daily exposure limit period, daily exposure limit value, daily exposure action value while for waves the items looked at are Effective dose limit, Effective dose limit in a single year and equivalent dose limit, in the lens of the eye, in the skin,' in the hands and feet.

Environmental Impacts Assessment Guidelines

After reviewing the EIA guidelines, the consultant identified six (6) potential areas for harmonisation. The areas for harmonisation have followed the life cycle approach of the road project. The identified areas for harmonisation are The Environmental Assessment Process, Project Planning and Pre-feasibility Phases, Feasibility Study and Preliminary Design Phases Construction Phase – Supervision and Monitoring Traffic Operations and Road Maintenance and Decommissioning.

The Environmental Assessment Process

Under the Environmental Assessment Process, the harmonisation was be carried out on objectives and Functions, Steps in the Environmental Assessment Process and the Roles and Responsibilities of the Road Authority.

Project Planning and Pre-feasibility Phases

For this phase of the road project, the harmonisation earmarked on environmental Registration and Project Brief, Environmental Screening, Scoping of the EIA Study, Terms of Reference for the Environmental Expert and Preliminary Environmental Impact Assessment.

Feasibility Study and Preliminary Design Phases

The harmonisation for feasibility study and preliminary design phases focused on the EIA Study, Environmental Management Plan (EMP), Compensation and Resettlement Plan (CRP), Road Safety Audit (RSA), Submission of Environmental Impact Statement, Review of the EIS and EIA Certificate.

Construction Phase – Supervision and Monitoring

The construction phase of the project witnessed the harmonisation being carried out in the following areas; Environmental Follow-up Activities, Pre-construction Activities, Environmental Supervision, Environmental Compliance Monitoring, Meetings and Communication, Final Inspection and Handing Over of Site, Self-Auditing and Control Auditing.

Traffic Operations and Road Maintenance

Harmonisation for this phase of the road project was carried out on the Environmental Monitoring and Follow-up, The Road Authority's Environmental Auditing, Control Auditing, Environmental Management in Road Maintenance, Environmental Management of Vehicles and Traffic Operations.

Guidelines for Socioeconomic Impact Assessment

Generally, socio-economic impact assessments are conducted with a view to preventing or moderating unacceptable adverse social environmental effects from the proposed actions and projects.

Socioeconomic impact assessment also provides a foundation for measuring the cumulative impacts (long term) of road projects on the community's economic resources. While a new road project may create employment, influx of migrant workers may exert pressure on the existing social facilities, which leads to occupational health related problems (cholera and HIV/AIDS, for example). The degradation of natural resources may lead to scarcity of firewood and herbal medicine and land degradation causing food insecurity and deepening poverty. It therefore recommended conducting socioeconomic impact assessment of any road project in EAC.

Guidelines for Compensation and Resettlement

Compensation will be required when steps to reduce impacts on people are not possible or insufficient. Compensation provisions are supposed to provide enough resources for the affected individuals to purchase replacement properties. These provisions should also ensure that displaced people are not worse off economically and socially than before their displacement as a result of the road project. Recommendation is to put in place a community-driven development plan to implement compensation.

Conclusion and Recommendations

General

- The recommended environmental standards to be used in EAC are for water quality standards, air quality (including vehicle emission standards), noise standards, discharge of effluent standards, soil quality standards, vibration and electromagnetic waves standards
- Where there is an already harmonised environmental standard in EAC, the road should adopt the same
- The EIA guideline recommends the use of environmental police unit to enforce the environmental laws and regulations
- There should be an enforcement plan to enforce the harmonised and developed environmental standards

- It therefore recommended conducting socioeconomic impact assessment of any road project in EAC and put in place a community-driven development plan to implement compensation

Structure/Format for the Manuals and Guidelines Prepared

Environmental Assessment, Management and Standards

Since the bottom line of this consultancy assignment was to come up with the Guidelines and Manuals for Environmental Assessment, Management and Standards for Road Sector in EAC, the study has proposed the format/structure for environmental standards to be used in Road Sector in EAC. The manuals and guidelines are with respect to environmental assessment where the EIA guidelines have been described. There are also guidelines for general environmental protection and management. Moreover, there are guidelines for socio-economic and cultural assessment and compensation and resettlement. There are also appendices for environmental quality standards for discharge of effluent standards, air standards, water quality standards, standards for effluent/wastewater discharge, noise standard, solid quality standards, vibration and electromagnetic waves and microwaves. The proposed table of contents for Environmental Standards are outlined below.

The Proposed Contents of the Environmental Assessment and Management Manual and Guidelines to be Applicable to the Road Sector in EAC

Environmental Assessment and Management Guidelines for Road Projects

Two levels of guidelines have been prepared, namely guidelines at the road project level where environmental assessment and activities to be followed during different phases of road projects have been described in details. In the second level of guidelines, consideration has been given to the road facility which is operational. At this level the road operator which for EAC is road authority in a member state, is supposed to follow the guidelines that are describing the general environmental management and operation of the road as a facility. However for the road projects that will be of trans-boundary in nature, the Trans-boundary Environmental Assessment guidelines for shared ecosystems in East Africa (EA) as have been prepared by EA should apply

The appropriate timeline of environmental assessment and management activities in the road sector are correlated closely with the road project cycle activities. With the purpose of making the guidelines operational and logical to a road planner or a road engineer it was therefore decided to link the description of environmental assessment and management activities to the stages of the project cycle. Hence, the guidelines are broadly structured into three parts as explained here below:

Part One: Procedures For Environmental Assessment of Road Projects: This is the aspect at the road project level whereby the environmental assessment of the road projects should be done. It is chapter two of the manual.

Part Two: General Environmental Protection and Management: It is an aspect that the road is operating whereby the road facility is already in place and the road authority in a member state for operating the road or so called road operator has to ensure that the road authority in a member state sticks to environmental management and operation. This is chapter three of the manual.

Part Three is appendices which include environmental quality standards, submission forms, checklists, examples and templates. This aspect forms an integral part of the guidelines.

The detailed description of the Guidelines and Manuals for Environmental Assessment, Management and Standards in Road Sector in East African is provided in Annex B 3.

Environmental Quality Standards

The study proposed the structure of the manual and guideline for ach environmental standard. The proposed content of each standard is as followed; Title Page: EAC Standard for (a given environmental standard), Inside Pages :(page no 1), EAC standards number and © EAC 2011. For the subsequent pages the manual and guideline have Foreword, Scope, Normative References, Definitions of Terms and Phrases, Requirements (in here permit limits and methods of testing are included), Compliance with specified effluent limits, Bibliography (References) and Annexes (if there are any).

The detailed manuals and guidelines for environmental standards are found in Appendix B3. It has to be noted that the manuals and guidelines are only for environmental standards that have been harmonised and developed from this study. For the one that EAC has already harmonised, the study has adopted but has not included them in this report.

Enforcement Plan

In order to implement the harmonized and developed environmental standards in EAC, it is recommended to have the enforcement plan. The enforcement plan will involve the following actions; Discovering Violations, Notice of Violation (NOV), Response by Facility, Orders (and Compliance Agreements, Dispute Resolution Provisions, Supplemental Environmental Projects (SEPs), Impact of Fund Availability, Community Involvement in Enforcement Actions and Publicizing Enforcement Actions.

1. INTRODUCTION

This Chapter gives general background information about the importance of environmental standards and EIA for sustainable environmental management. The chapter further explains how the environment is polluted as the results of road works/projects.

1.1 General Background

The second part of the Thematic Area no 2 is to harmonize the environmental standards and EIA guidelines for road sector. Although roads are economically and socially beneficial to the nation, it has been noted that poorly planned roads and bad construction practices have adverse effects to human health and the environment. This is the case with the EAC member states roads. In most of EAC countries, the roads Sub-Sector is part of the overall transport sector that has the infrastructure consisting of national, district, urban, community, public agency and privately owned roads. Negative environmental and socio-economic impacts resulting from road sector development and management include: loss of biodiversity; land degradation; involuntary resettlement, unintended induced development; deforestation, pollution of air, water and soil; roads safety and human health. Road projects like any project have also the impact to the environment and therefore in course of mitigating the environmental impacts emanating from the road project one has to ensure that the road project planning, design, construction, operation and maintenance have to meet the environmental regulation and standards. An environmental standard is a policy guideline that regulates the effect of human activity upon the environment. Standards may specify a desired state (e.g. lake pH should be between 6.5 and 7.5) or limit alterations (e.g. no more than 50% of natural forest may be damaged). Environmental standards are a set of quality conditions that are adhered or maintained for a particular environmental component and function. The different environmental activities have different concerns and therefore different standards.

1.2 Environmental Standards

An environmental standard is a policy guideline that regulates the effect of human activity upon the environment. Standards may specify a desired state (e.g. lake pH should be between 6.5 and 7.5) or limit alterations (e.g. no more than 50% of natural forest may be damaged). Environmental standards are a set of quality conditions that are adhered or maintained for a particular environmental component and function. The different environmental activities have different concerns and therefore different standards.

For the purpose of the environmental regulations, the minimum environmental quality standards applicable to roads works are in relation to: Water quality; Discharge of effluent; Air quality; Control of noise and vibration pollution; Sub-sonic vibration; Soil quality; Control of noxious smells; Light pollution; Electromagnetic waves and microwaves; Hazardous substances and materials; and Any other environmental quality standards.

The following section explains the environmental pollution that occurs as the results of undertaking of the roads works.

1.2.1 Water Pollution

When any road project is undertaken, the water in the vicinity may be polluted due to the entrance or spillage of solid matter, contaminants, debris, refuse garbage, cement, concrete, sanitary waste, radioactive substances, oil, petroleum products, aggregate, processing failings, minerals salts,

thermal pollution and other pollutants and wastes into any stream, dry or flowing water sources, wetlands, lakes, sea, underground water sources or any other water bodies.

Where it is necessary to discharge waste waters from aggregate processing, concrete batching or other construction operations into streams, water sources or other surface waters, the road authority shall use turbidity control methods such as setting ponds, gravel filter entrapment dikes, approved flocculating processed which are not harmful to species, re-circulation systems for washing aggregate or other approved methods. Moreover, any road project complies with all applicable laws orders and regulations and water quality standards concerning the control and abatement of water pollution, and compensates for polluted water sources and provides the consumers affected by pollution with clean drinking water transported through pipes or otherwise from unpolluted sources.

1.2.3 Air Pollution

The air is polluted under road sector during the operation of equipment and vehicles which release excessive emissions of exhaust gases due to poor engine adjustments or other inefficient operating conditions until corrective repairs or adjustments are made. It is also polluted when burning of wastes materials from road works, such as tyres, plastic, rubber products, bituminous products, outdated equipment, clearing of vegetation and other materials. It is therefore recommended to be avoided and the road authority or contractor concerned with road works shall dispose of waste materials by methods indicated in the Environmental Code of Practice of Road Works.

1.2.4 Pollution due to Dust

The road authority normally ensures that any undertaking of the road works is in compliance with the applicable laws and regulations pertaining to the prevention and control of air pollution which means that the road authority performing road works has to take all reasonable measures to reduce emission of dust and to prevent dust from damaging crops, orchards, cultivated fields or cause nuisance to people in the areas surrounding or approximate to the road works.

1.2.5 Noise Pollution

The noise is polluted when the road works are undertaken due to the blasting operations, use of jackhammers, pile driving, rock crushing or other operations producing high intensity.

1.2.6 Use of Explosives

The responsible use of pesticides, toxic or other hazardous substances for road works has to comply with relevant legislation on hazardous substance under the Environmental Management Act. Except with the permission from the relevant authority, the road authority shall not import, store or handle hazardous compounds or substance for use in the road works.

1.2.7 Soil Pollution

The soil is polluted in the road project due to unintentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous substance, hazardous waste, or pollutant.

Like it has been indicated above that road project have potential environmental effect during both construction and operational phases and therefore the procedure for environmental impact assessment of road projects have to be applied.

1.2.8 Electromagnetic Waves Pollution

Source -
Anything that may cause radiation exposure, such as by emitting ionizing radiation or releasing radioactive substances or materials. For example, materials emitting radon are sources in the environmental sterilization gamma irradiation unit in a source for the practice of radiation preservation of food, an X-ray unit may be a source for the practice of radio diagnosis, and a nuclear power plant is a source for the practice of generating electricity by nuclear power.

For road sector, sources of electromagnet waves can be from spent fuel storage facility where the exposure can be of two categories;

Occupational exposure - All exposures of workers incurred in the course of their work. This can be during construction or operational phases of the project where workers or any person get close to sources of waves like deposits of uranium.

Potential exposure - Exposure that is not expected to be delivered with certainty but that may result from an accident at a source or owing to an event or sequence of events of a probabilistic nature, including equipment failures and operating errors.

Practices - Any human activity that introduces additional sources of exposure or exposure pathways or extends exposure to additional people or modifies the network of exposure pathways from extending sources, so as to increase the exposure or the likelihood of exposure of people or the number of people exposed.

1.3 Environmental Impact Assessment Guidelines

The function of the Environmental Impact Assessment (EIA) process in the road sector is to identify the positive (beneficial) and negative (adverse) impacts of a proposed road project on the natural and human environment and then to formulate appropriate remedial/ mitigation measures to avoid or minimize adverse negative impacts and to enhance beneficial impacts. The EIA process may help develop more environmentally friendly road projects by reducing negative environmental impacts through alternative approaches, design modifications, and remedial measures. The application of EIA to road construction, upgrading, improvements, rehabilitation, and maintenance and to transport operations is a preventive strategy.

The objectives of an environmental assessment process for a road project are to:

- Ensure environmentally sound and socially fair planning and implementation of the road project;
- Ensure that stakeholders/potentially affected people are informed about the project and that their viewpoints and concerns are considered in the planning and implementation of road project; and
- Reveal the environmental and socio-economic background for an informed decision-making regarding the project.

The environmental assessment process is not only a decision-making tool, but also provides a specific forum to systematically undertake public consultation in a manner that allows stakeholders to have direct input to the environmental management process.

For an environmental impact assessment to be effective and successful, the road authority staff must understand the assessment process and must coordinate the outcomes of the EIA study with

road planning, design, contract preparation and tendering, construction, and operation and maintenance activities. This will allow sufficient lead-time and funds to be allocated, if needed. It is also essential that road authority staff know:

- How to recognize potential environmental concerns;
- When to call other specialists;
- How to specify mitigation measures; and
- How to implement mitigation plans and environmental contract clauses.

The process also entails preparing contract clauses on and developing work procedures in relation to roadside communities, flora and fauna, and unique or endangered species, and training staff in order to ensure environmentally and socially, and socio-economically sound and fair road sector environmental management.

There must be close cooperation between supervising road engineer/technician and the environmental expert(s). Consultation is important with affected residents, interested members of the public, government departments, and other organisations, collectively known as the stakeholders. The road authority staff involved in the consultation process must know how to address various institutional and cultural needs and differences.

The following type of projects are subject to environmental assessment and are required to be registered prior to the commencement of any implementation in accordance with the Environmental Impact Assessment and Audit Regulations made under the Environmental Management Act:

Roads project types that are listed on the Environmental Assessment and Audit Regulations list of projects for which environmental impact assessment is mandatory;

- Any new road construction;
- Upgrading of a road;
- Rehabilitation of a road; and
- Any road project which requires opening of a new borrow pit, a new quarry or establishment of a temporary facility in a sensitive area.

In addition to the environmental standards, environmental impact assessments (EIA) guidelines should be followed. The main objective of the guidelines is to provide an operational tool to incorporate environmental and socio-economic considerations into all phases of road development, including planning, feasibility, design, construction and operation and maintenance of roads. Hence, the guidelines explain the various steps in the environmental impact assessment (EIA) process. It is envisaged that the guidelines will contribute to an increased awareness about EIA in the road sector and to a road management practice that increasingly avoid negative impacts of road sector activities on our natural and cultural environment and on human health.

2. OBJECTIVES AND METHODOLOGY

The following Chapter describes the objectives of the assignment in accordance with the Terms of Reference (ToR) but also explains the approaches that were used to achieve the objectives.

2.1 Objectives

The harmonization of the environmental regulations and standards component of assignment was guided by Terms of References (ToR) which had the following objectives;

- Review existing environmental regulations and standards
- Collect Stakeholder Views and Conduct Workshops
- Facilitate Expert Group Meetings to Work on the Harmonization Process
- Preparation of Detailed Guidelines and Manuals.

Road projects like any other projects have a life cycle assessment (LCA) which essentially includes: planning, feasibility, design, construction and operation and maintenance of roads. Activities that are undertaken during these stages have various environmental implications. The harmonization of environmental regulations and standards therefore approached the sector in its LCA approach.

2.2 Methodology

In order to achieve the objectives of the Harmonization of the Environmental Regulations and Standards, generally three phases of the study were carried out;

2.2.1 Phase 1: Inception Phase

In the inception phase of study, the consultant;

- Identified the documents relevant for the assignment in all member states
- Paid the site visits to all member states to acquire the documents
- Reviewed all the relevant documents
- Did preliminary analysis and reported the preliminary results
- Produced the Inception Report

2.2.2 Phase 2: Stakeholders and Group of Expert Views Collection

Phase 2 of the assignment was carried out in two stages as follows:

2.2.2.1 Collect Stakeholder Views and Conduct Workshops

In this part of assignment, the tasks were to;

- firm up and contact the identified list of stakeholders in all member states
- present the findings from the inception report and the detailed study
- facilitate group discussion
- collect the views and
- analyze and synthesize the views as the inputs to the third phase

After the review of the regulations and standards, then the findings were shared among the stakeholders for the road sector in EAC who were identified during the inception phase. The identified stakeholders were as follows;

- Road Authorities (each country has its own)

- Environmental (Government) Bodies (Each country has its own)
- Lead agencies (each country has its own)
- Developers
- Environmental Practitioners (each country has its own)
- Users

2.2.2.2 Facilitate Expert Group Meetings to Work on the Harmonization Process

In the second stage of this phase, the consultant;

- presented the results from the stakeholders workshop invited from all member states
- facilitated the group discussion
- collected their views
- analyzed and synthesized their views,
- identified the areas to harmonize the regulations and standards

In the course of harmonizing the standards and regulations a group of expert convened for a meeting in which the consultant facilitated the harmonization process. The identified group of experts for all member states included:

- Bureau of Standards Experts
- Road Experts
- Air quality standards Experts
- Water quality Standards Experts
- Standards for the discharge of effluent into water Experts
- Standards for the control of noxious smells Experts
- Standards for the control of noise and vibration pollution Experts
- Standards for subsonic vibrations Experts
- Soil Quality Standards Experts
- Standards for Minimization of Radiation Experts

2.2.3 Phase 3: Preparation and Production of Detailed Guidelines and Manuals

The third phase of the study was based on the information available in which the guidelines and manual for standards and EIA guidelines were prepared. The regulations and standards were into the following categories:

- Ambient Standards which are standards set for purposes of addressing the effects of discharges into the environment; they set the maximum pollutant concentration permitted in the environment.
- (ii) Receptor Standards which aim at dischargers (polluters) whose activities harm the environment.
- (iii) Emissions Standards which set permissible emissions which are less harmful to man and his environment.
- (iv) Specification Standards are those that regulate activities with a view to avoid or minimize environmental pollution arising there from.
- These standards prescribe materials which may be used in construction or manufacturing activities

Specifically, having gathered the information from the first two phases of the study, the consultant prepared Guidelines and Manuals for Environmental Standards for East Africa. The detail of each category is outlined below:

2.2.3.1 The Environmental Standards Guidelines and Manuals for Road Sector in East Africa

The consultant prepared and produced the following documents for the environmental standards the contents of each were worked out during the harmonization process;

- Air quality standards (adopted from Catalogue of East African Standards 2010)
- Water quality Standards (adopted from Catalogue of East African Standards 2010)
- Standards for the discharge of effluent into water (Harmonized)
- Standards for the control of noise (Harmonized)
- Standards for Vibrations (Developed)
- Soil Quality Standards (Harmonized)
- Standards for Electromagnetic Waves (Developed)

3. OVERVIEW OF ENVIRONMENTAL REGULATIONS AND STANDARDS AND EIA GUIDELINES

This Chapter presents the general overview of the environmental standards and EIA guidelines. It only gives the general context of the standards and guidelines.

3.1 Environmental Standards

3.1.1 Noise Pollution

Noise pollution is essentially an urban problem. There are evidences suggesting that noise levels can cause various physiological and psychological health problems ranging from annoyance and disturbance to heart diseases. In addition hearing damage caused by loud noise can be irreversible. Noise pollution may be regarded special mainly because personal and subjective judgment is a big part of recognizing a sound as noise pollution or not. In addition, the damage is localized and sporadic in comparison to other types of pollution, for example water and air pollution. The problem of noise pollution is exacerbated by improper land use planning in most of our cities, municipalities and towns. Standard is developed partly due to the requirements of the law, Environmental Management Act (EMA) and partly because of the public outcry on loud noises emanating from various locations including places of entertainment, industries and households. Therefore, the limit values provided by this Standard will provide the basis for authorities to assess and manage environmental noises.

The standard specifies limits for environmental noise only. It is not applicable for noises in the occupational environment.

3.1.2 Air Quality – Vehicular Exhaust Emissions Limits

Emissions from motor vehicles are a significant source of air pollution. The problem of vehicular emissions is compounded by the fact that the pollutants are emitted at ground level which is in close proximity to the breathing zones of people.

Vehicular emission contributes significantly to ambient concentrations of pollutants of such as carbon monoxide, oxides of nitrogen and sulphur, lead, and particulates. At sufficiently high concentrations, these pollutants can cause health problems as well as degrading the environment and quality of life.

In particular, diesel – driven vehicles particulates are very fine and a large portion contains particles less than 2.5 microns in size. These fine particulates are generally known as PM 2.5 and they can penetrate the deeper recesses of human lungs and cause respiratory problems. With increasing number of vehicles, it is therefore imperative to have a stringent programme to control smoke emission from vehicles to ensure that ambient air quality remains healthy.

This standard together with other initiatives which include the use of cleaner fuel, such as unleaded petrol and diesel with low sulphur content of below 0.05% could enable achieving the goal of having healthy ambient air quality.
The standard gives permissible limits of some common substances found in exhaust emissions of motor vehicles, namely carbon monoxides, suspended particulate matter (PM), oxide of nitrogen

and hydrocarbons. The standard covers all types of vehicles namely; passenger cars, light commercial vehicles, heavy-duty vehicles, and two and four strokes motor cycles and scooters

3.1.3 Air Quality – Specification

Rapid development will inevitably also mean rapid industrialization and urbanization. A possible consequence is the deterioration of our precious environment, if proper control is not planned. The air quality standards aims at ensuring that as much as we desire for development, the environment, and life must be protected.

The set of baseline parameter on air quality and emissions given in the standard are based on a number of considerations so as to come out with practical and acceptable limits. The set is not exhaustive, but has been prioritized. In the course of implementation, more parameters may be added to the list when the need to review this standard arises. This will help developers such as industrialists to keep abreast with environmentally friendly technologies. This standard gives two types of limits viz 'guidelines' and limits level. The limit levels which are binding and may be used for regulatory purposes are usually measurable in shorter periods averaging. On the other hand, the guidelines are based on studies that indicate safe levels averaged over relatively longer periods and they are mostly derived from WHO guidelines.

Thus though one may be within the 'limits level', long term exposure guidelines should help one to assess the magnitude of risk of particular air pollutants over long periods. The limits given are of general application. However, industry –specific limits for some categories of heavy pollution sources will be prepared as separate standards for the peculiar pollutants characteristics and loads.

Standard gives permissible limits for some common substances found in polluted air, namely sulphur dioxide, carbon monoxide, suspended particulate matter (dust), oxide of nitrogen, hydrocarbons, and lead. The standard covers both the ambient air and emission sources.

3.1.4 Soil quality – Limits for soil contaminants in habitat and agriculture

Soil is among the most abused component of the environment. Polluted waters and air will in many cases unload the pollutant into the soil and vice versa. The land is also affected through anthropogenic activities such as mining, agriculture activities, as well as solid and liquid waste disposal. Hence, a variety of chemicals, both organic and inorganic compounds from these activities contaminate the soil in varying degrees. Examples of such compounds include pesticides from agriculture, heavy metals from mining, smelting processes and fuel combustion and hydrocarbons from haphazard disposal of wastes such as petroleum, used oil and oil sludge.

Various healthy consequences may arise from exposure to contaminated oil depending on pollutant type, pathway of attack and vulnerability of the exposed population. For example, chromium and many of the pesticide and herbicide are carcinogenic to all populations. Soil contaminants can also have significant deleterious consequences for ecosystems such as alteration of metabolism of endemic microorganisms and arthropods resident in a given soil environment.
Although agriculture, mining and various industrial activities are crucial for economic growth, they need to be monitored because of their impact to the environment. This standard aims at protecting agricultural and habitat soil from being polluted by such activities.

This Standard has to be reviewed on regular basis depending on changing circumstances and availability of more data from research. It sets limits for soil contaminants in agriculture and habitat.

3.1.5 General tolerance limits for municipal and industrial wastewaters

Municipal and industrial wastewaters are important point source of potential pollutants. They are frequently viewed by much of the public as being responsible for water pollution problems in the country. They generally contribute oxygen demanding substances, suspended matter, pathogens and many specific chemicals, including heavy metals. The pollutants are capable of causing a wide variety of problems in watercourses or downstream uses. Effluent disposed of on land may seep into aquifers and pollute groundwater. The problems associated with municipal and industrial wastewater pollution include damage to marine life, wildlife resources and human health. Thus, to ensure sustained water quality and health aquatic ecosystems and human health in general, monitoring of effluents and compliance to the standards according to law is of paramount importance. In this regard, monitoring against standards proves to be an important component of a sound environmental management programme.

Environmental pollution resulting from municipal and industrial discharges is growing fast. In municipalities, the rapidly growing pollution and high rate of industrial growth are by and large responsible for increasing waste discharges. Both land and water bodies within and around urban centres and those in which small-scale mining activities are being carried out are increasingly coming under threat as they continue to receive wastewaters laden with hazardous pollutants. Generally, the influents of municipal and industrial origin are discharged into water bodies and municipal sewers and treatment facilities.

The effluents are varied and complex and the degree of their pollution effect upon the aforementioned systems depend on the constituents of the individual effluent and corresponding concentrations/load. The rationale for including permissible limits with regard to physical parameters, organic and inorganic substances as well as microbiological component is based upon their detrimental effect upon human health, aesthetic value, aquatic environmental and treatment facilities.

The standard is applicable to effluent discharged from all establishments. The standard prescribes the permissible limits for municipal and industrial effluents discharged directly into water bodies. The effluent parameters contained herein include Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Color, pH, Temperature, Total Suspended Solids (TSS) and Turbidity. Also this standard gives permissible limits for inorganic substances including Aluminium (as Al), Arsenic (As), Barium (Ba), Cadmium (Cd), Chlorides(Cl^-), Chromium VI, Cobalt (Co), Copper(Cu), Fluorides(F^-), Iron, Lead (Pb), Manganese, Mercury (Hg), and Nickel (Ni). Other are Selenium (Se), Silver (Ag), Sulphate(SO_4^-), Sulphides (S^-),Tin (Sn), Total Chromium, Total Kjeldahl Nitrogen (N), Nitrates (NO_3^-), Total Phosphorus (P), Zinc (Zn), and Vanadium.

Organic substances whose permissible limits are included in this standard are 1,1,1-Trichloroethane, 1,2- Dichloroethylene, 1,1,2- Trichlorodethane, 1,2- Dichloroethane, 1,3-Dichloropropane, *cis*-1,2-Dichloroethylene, Dichloromethane, Phenols, Tetrachloroethylene, Tetrachloromethane, Trichloroethylene as well as other aliphatic aromatic hydrocarbons (excluding the mentioned ones).Others are aromatic amines, alkyl benzene sulfonate (ABS), oil and grease (Petroleum Ether Products), organochlorine pesticides and other pesticides(excluding the

organochlorine pesticides). Permissible limit for microbiological coliform organisms is also given in this standard.

The standard for wastewater effluents is to indicate the quality of effluents permitted to be discharged into water bodies. The use therefore is meant to promote a consistent approach towards prevention of water pollution in the environment.

In this regard, the wastewaters to be discharged into receiving waters should be free from:

- Substances that will settle in receiving waters forming putrescent or otherwise objectionable sludge deposits, or that will adversely affect aquatic life.
- Floating debris and other material in amounts sufficient to be noticeable and lead to deterioration of receiving waters.
- Nutrients in concentration that promote nuisance growth of algae or aquatic weeds in the receiving waters.
- Materials in quantities or concentrations which are toxic or harmful to life.
- Materials that alone or in combination with other materials will produce colour, turbidity, and odour in sufficient concentration to create a nuisance or adversely affect the aquatic ecosystem.

3.1.6 Drinking Portable Water – Specification

This standard prescribed the quality requirements for drinking (potable) water distributed in the food industry, domestic and catering purposes. It applies to bacteriological, biological, virological, physical, chemical and radiological quality criteria. It is intended also for community piped water supplies i.e. those water system serving cities, municipalities and townships, community standpipes and wells and drinking water distributed by tankers. This standard does not apply to bottled mineral waters.

All supplies of drinking water are required to be pleasant and safe to drink. Absence of turbidity and absence of colour, palatable and acceptable, taste and odour are of utmost importance in public supplies of drinking water. The situation, construction, operation and supervision of water supply, its reservoirs and its distribution systems exclude any possible contamination of the water.

Drinking water should not contain any organisms of faecal origin. The presence of coliform organism should be considered as an indication of remote faecal pollution. The presence of Escherichia coli faecal coliform) indicates recent faecal pollution, and hence dangerous condition if found in consecutive sample of water tested. Coliform organisms are those organisms which are capable of fermenting lactose with production of acid and gas at 35C- 37C in less than 48 hours and are in dole negative. Escherichia coli (faecal coliform) are those organisms which are capable of fermenting lactose with the production of acid and gas at 44C in less than 24 hours, and which are in dole positive. The microbiological standard to be aimed at is the same as the WHO standard which demands that there be no coliform (E.coli) in each 100ml portions (piped supplies).

3.2 EIA Guidelines

3.2.1 General

The EIA process makes sure that environmental issues are raised when a project or plan is first discussed and that all concerns are addressed as the project gains momentum through to implementation. Recommendations made by the EIA may necessitate the redesign of some project components, require further studies, and suggest changes which alter the economic viability of the project or cause a delay in project implementation. To be of most benefit it is essential that an environmental assessment is carried out to determine significant impacts early in the project cycle so that recommendations can be built into the design and cost-benefit analysis without causing major delays or increased design costs. To be effective once implementation has commenced, the EIA should lead to a mechanism whereby adequate monitoring is undertaken to realize environmental management. An important output from the EIA process should be the delineation of enabling mechanisms for such effective management.

3.2.2 EIA Steps

The way in which an EIA is carried out is not rigid: it is a process comprising a series of steps. These steps are outlined below. The main steps in the EIA process are;

- Screening
- Scoping
- Prediction and mitigation
- Management and monitoring
- Audit

3.2.3 Outline of EIA Steps

Figure 1 shows a general flow diagram of the EIA process, how it fits in with parallel technical and economic studies and the role of public participation. In some cases, such as small-scale irrigation schemes, the transition from identification through to detailed design may be rapid and some steps in the EIA procedure may be omitted.

Screening often results in a categorization of the project and from this a decision is made on whether or not a full EIA is to be carried out.

Scoping is the process of determining which are the most critical issues to study and will involve community participation to some degree. It is at this early stage that EIA can most strongly influence the outline proposal.

Detailed prediction and mitigation studies follow scoping and are carried out in parallel with feasibility studies.

The main output report is called an Environmental Impact Statement, and contains a detailed plan for managing and monitoring environmental impacts both during and after implementation.

Finally, an audit of the EIA process is carried out sometime after implementation. The audit serves as a useful feedback and learning function.

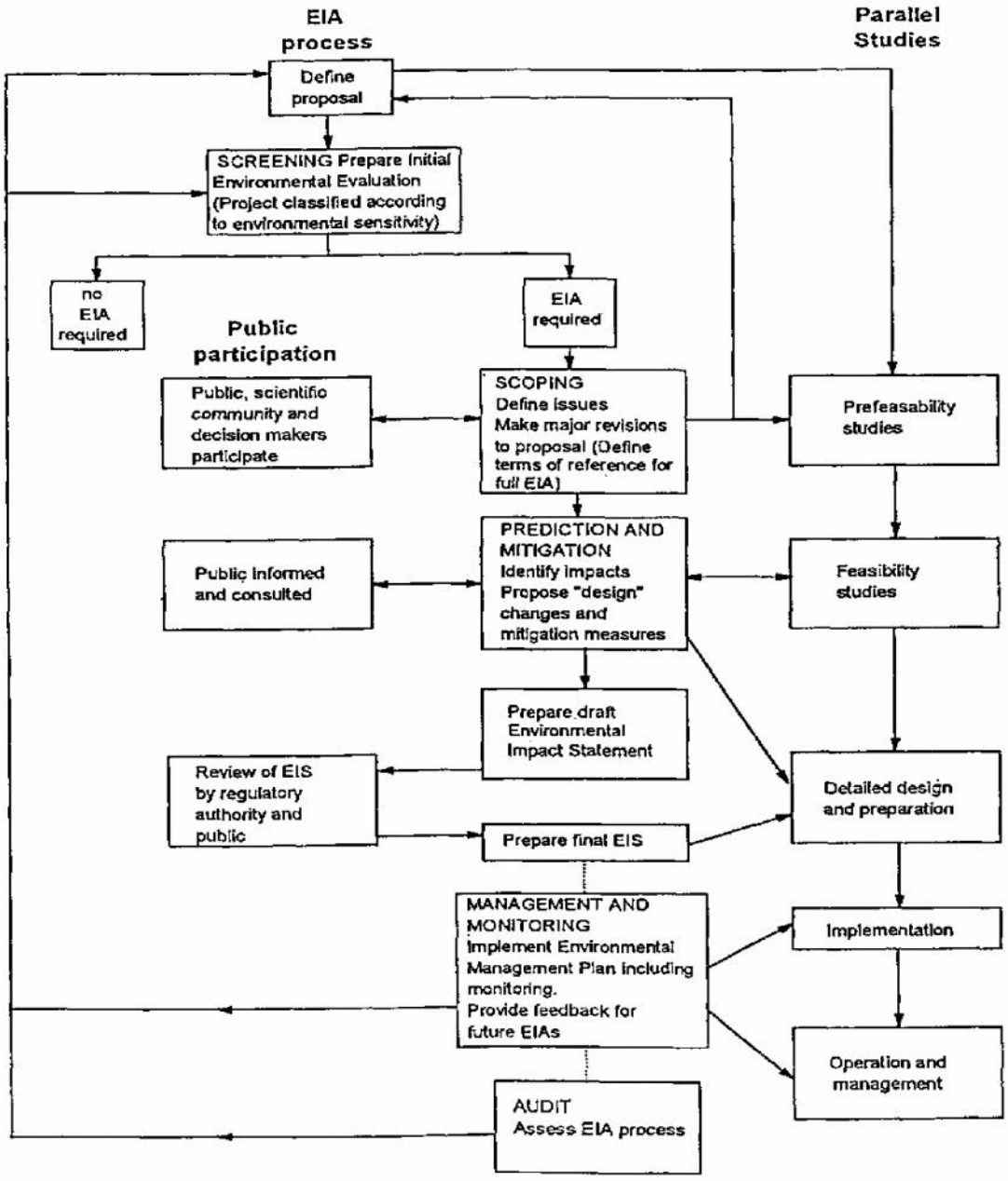

Figure 1: Flow diagram of the EIA process and parallel studies

3.2.4 Resources

An EIA team for a road project is likely to be composed of some or all of the following: a team leader; a hydrologist; an irrigation/drainage engineer; a fisheries biologist/ecologist; an agronomist/pesticide expert; a soil conservation expert; a biological/environmental scientist; an economist, a social scientist and a health scientist (preferably an epidemiologist). The final structure of the team will vary depending on the project. Specialists may also be required for fieldwork, laboratory testing, library research, data processing, and surveys and modeling. The team leader

will require significant management skill to co-ordinate the work of a team with diverse skills and knowledge.

There will be a large number of people involved in EIA apart from the full-time team members. These people will be based in a wide range of organizations, such as the project proposing and authorizing bodies, regulatory authorities and various interest groups. Such personnel would be located in various agencies and also in the private sector; a considerable number will need specific EIA training.

The length of the EIA will obviously depend on the programme, plan or project under review. However, the process usually lasts from between 6 and 18 months from preparation through to review. It will normally be approximately the same length as the feasibility study of which it should form an integral part. It is essential that the EIA team and the team carrying out the feasibility study work together and not in isolation from each other. This often provides the only opportunity for design changes to be made and mitigation measures to be incorporated in the project design.

The cost of the study will vary considerably and only very general estimates can be given here. Typically, costs vary from between 0.1 and 0.3 percent of the total project cost for large projects over US$ 100 million and from 0.2 to 0.5 percent for projects less than US$ 100 million. For small projects the cost could increase to between 1 and 3 percent of the project cost.

4. REVIEW OF ENVIRONMENTAL STANDARDS AND REGULATIONS AND EIA GUIDELINES

This Chapter reports on the findings of the preliminary review carried out. The preliminary findings are divided into general and country specific findings;

4.1 General Review of Environmental Standards in EAC

Our review of the documents and various best practices elsewhere, have found out that for the environmental regulations, the minimum environmental quality standards applicable to road works are in relation to:

- Water Quality Standards;
- Discharge of effluent;
- Air quality (including Vehicle Emission Standards);
- Control of noise;
- Vibration Standards;
- Soil Quality Standards ;
- Control of Noxious Smells Standards;
- Light Pollution Standards;
- Electromagnetic waves and microwaves;
- Hazardous substances and materials; and
- Any other environmental quality standards

Now these being the minimum environmental standards required for environmental regulations applicable to the road works, the study proceeded on reviewing and scanning the environmental standards that are available among the member states in EAC. It has been found out that, with the exception of Burundi, other countries within the community, namely Tanzania, Uganda, Kenya and Rwanda have environmental standards that the countries have developed for themselves. The point to note here is that there is no even a single country that has fulfilled the minimum environmental standards applicable to roads works. Burundi adapts the standards and guidelines from internal standards. The following section summarizes the environmental standards that are found in the EAC:

Table 1 Summary of Environmental Standards available among EAC member states

Country	Environmental Standards Available
Tanzania	Air Quality, vehicle emission, Water Quality, effluents and receiving waters, Soil Standards, Noise
Uganda	Discharge of Effluent or Wastewater into Water or on Land, Ozone Depleting Substances and Products, soil quality, Noise,
Kenya	Sources of Domestic Water, Effluent Discharge into the Environment, Effluent Discharge into Public Sewers, Fossil Fuel Emission Control, Noise and Excessive Vibration Pollution Control,
Rwanda	Light, Vehicle emission, Noise pollution, Water quality, Soil quality, Effluent discharge, Air quality
Burundi	None
Zanzibar	None

From the table above, the description of standards available for each country is given below:

Tanzania

In Tanzania, the available environmental standards are:

Air Quality Standards which include:

- Ambient Air Quality Standards
- Emission Standards for stationary sources

There are also vehicle emission standards which include;

- Vehicle emission standards
- Emission standards for motorcycles and mopeds

Water Quality Standards is another standard that is in Tanzania. The water quality standards is for

- Microbiological quality standards for drinking water
- Chemical and
- physical limits for quality of drinking water supplies

There are standards for effluents and receiving waters in Tanzania

Noise Standards in Tanzania include

- Classification of Land Use Categories
- Standard noise values for different types of land use categories
- Noise standards for areas facing roads
- Noise emission standards for construction equipment and small and large vehicles

The other available standard in Tanzania is Soil Standards. These standards as applicable in Tanzania include;

- Contaminant Limits for Volatile Organic Compounds
- Contaminant Limits for Heavy Metals
- Contaminant Limits for Pesticides
- Contaminants Limits for Other Chemicals

Uganda

In Uganda the available standards are

- Standards for Discharge of Effluent or Wastewater into Water or on Land in Uganda

- Management of Ozone Depleting Substances and Products in Uganda

There are also minimum standards for management of soil quality in Uganda which include:

- Soil quality parameters and classes for rain-fed agriculture
- Soil quality parameters and classes for irrigated agriculture
- Soil quality parameters and classes for wetland rice systems under natural flooding
- Soil quality parameters and classes for wetland rice under irrigated systems.

Noise Standards and Control in Uganda
The noise standards available in Uganda are for:

- Maximum Permissible Noise Levels for General Environment
- Maximum Permissible Noise Levels (Continuous or intermittent noise) from a Factory or Workshop
- Maximum Permissible Noise Levels for Impact or Impulsive Noise
- Maximum Permissible Noise Levels for Construction Site
- Maximum Permissible Noise Levels for Places or Establishments of Entertainment in Uganda
- Maximum Permissible Noise Levels for Places or Areas of Worship
- Maximum Permissible Noise Levels for Accelerating Vehicles
- Maximum Permissible Noise Levels for Mines and Quarries

Kenya

In Kenya the available environmental standards are for:

- Quality Standards for Sources of Domestic Water
- Standards for Effluent Discharge into the Environment
- Standards for Effluent Discharge into Public Sewers

Fossil Fuel Emission Control Standards in Kenya are for

- Petrol Powered Motor Vehicle Emission Standards in Kenya
- Diesel Powered Motor Vehicle Emission Standards

There are also Noise and Excessive Vibration Pollution Control Standards in Kenya which cater for;

- Maximum Permissible Noise Levels in Kenya
- Maximum Permissible Noise Levels for Construction Sites in (Measurement taken within the facility)
- Maximum Permissible Noise Levels for Mines and Quarries (Measurement taken within the facility)

Rwanda

In Rwanda, the available environmental standards are for;
Light pollution which include

- Road vehicles - Lighting and light devices

Vehicle emission standards

- Exhaust gas emissions during inspection or maintenance Gasoline (Petrol) unleaded - Specification

There are also noise pollution standards which include

- Noise emitted by accelerating road vehicles

The other standards available in Rwanda are standards for water quality, soil quality, effluent discharge and air quality.

Having seen the summary of available standard for each country as given above, the detailed description of the available standard for each country in EAC in terms of what each standard includes and its numerical values is given below. It has however to be noted and taken into account that the detailed description is only for countries that have the standards, namely Tanzania, Uganda, Kenya and Rwanda. The section doesn't describe the details for the environmental standards for Burundi and Zanzibar as they don't have any standard.

4.1.1 Tanzania

4.1.1.1 Air Quality Standards in Tanzania

This Tanzania standard gives permissible limits for some common substances found in polluted air, namely sulphur dioxide, carbon monoxide, suspended particulate matter (dust), oxide of nitrogen, hydrocarbons, and lead. The standard covers both the ambient air and emission sources. Ambient air means an outdoor air to which people; plants, animals and material may be exposed, while Suspended particulate matter means airborne particles of 10microns or less in diameter. On one hand black smoke mean visible (black) aerosol usually resulting from combustion while on the other hand emission limit is the highest permissible quantity of pollutants released into the air from a pollution source, expressed as the concentration of pollutants in relation to one unit of production or to the degree of air pollution caused by these sources (e.g. dark colour of smoke). Emission is defined in Tanzania as the transfer of pollutants from the atmosphere to a receptor and emission limit as the highest permissible weight concentration of pollutants contained in the air.
It has to be noted that in Tanzania:

- All the emissions limits are valid for concentration expressed for any dry gas under normal atmospheric conditions
- When the emission limits surpassed, other actions may be called in e.g. proper land usage/relocation of factories, enforcement of bylaws by local authorities (which may give more stringent specifications for emissions), revision of standards of types of fuels to be allowed.

The limits for two categories of air quality standards, namely the ambient air quality standards and Emission Standards for stationary sources are summarised in the two tables below.

4.1.1.2 Ambient Air Quality Standards in Tanzania

The ambient air quality standards applicable in Tanzania are shown in Table 2.

Table 2: Ambient Air Quality Standards in Tanzania

No	Pollutant	Guideline	Limit level
1	Sulfur oxides, SO_x (Considered as SO_2)	Annual mean of 40-60µg/Nm^3 (0.05-0.08mg/kg) or 24 hour average 100µg/Nm^3 (0.129 mg/kg)	Daily average of hourly values shall not exceed 0.1 mg/kg 0.5 mg/Nm^3 for 10 minutes
2	Carbon monoxide CO	Aims at preventing carboxy-haemoglobin levels exceeding 2.5-3% in non smoking people	1) A maximum permitted exposure of 100mg/Nm^3 for periods no exceeding 15 minutes 2) Time – weighted exposures at the following levels: a) 100 mg/ Nm^3 for 15 minutes b) 60 mg/Nm^3 for 30 minutes c) 30 mg/ Nm^3 for 60 minutes d) 10 mg/ Nm^3 for 8 hours Daily average of hourly values shall not exceed 10mg/kg and average of hourly values in eight consecutive hours shall not exceed 20mg/kg
3	Black Smoke and Suspended Particulate Matters (SPM)	Black Smoke 40 to 60 µg/Nm^3 (0.05-0.08 mg/kg) Total SPM 60 to 90 µg/Nm^3 (0.05-0.116mg/kg)	Daily average of hourly values shall not exceed 0.01 mg/ kg and hourly values shall not exceed 20mg/kg
4	Nitrogen Dioxide NO_x	Annual mean of 0.1 µg/Nm^3	150 µg/Nm^3 for 24 hours average value 120 µg/Nm^3 for 8 hours
5	Lead, Pb	Annual mean of 0.5-1.0 µg/Nm^3	1.5 µg/Nm^3 24 hours average value

4.1.1.3 Emission Standards for stationary sources in Tanzania

The emission standards for stationary sources is summarised in Table 3.

Table 3: Emission Standards for stationary sources in Tanzania

No	Pollutant	Guideline	Limit level
1	Sulphur oxides SO_x (To be reported as SO_2)	Large Combustion Plants (LCP) using solid fuel with thermal effect of : 50 to 100 MWth (Thermal Energy)	Yearly average of : 850 mg/Nm^3
		100 to 300 MWth	200mg/Nm^3
		>300 MWth	200 mg/Nm^3
		LCP using liquid fuel with thermal effect of: 50 to 100MWth	Yearly average of: 600 mg/Nm^3
		100 to 300MWth	400 to 200 mg/Nm^3 (linear decrease)
		>300 MWth	200mg/Nm^3
		LCP using gaseous fuel	35 mg/Nm^3
		LCP using low calorific gases from gasification of refinery residues, coke, oven gas, blast –furnace gas	800 mg/Nm^3
2	Carbon monoxide, CO	Liquid fuel combustion with heat output exceeding 5MW	Not to exceed 75 mg/Nm^3
		Solid fuel combustion with heat output of 50MW and above	Not to exceed the level of 250 mg/Nm^3
3	Hydrocarbon THC	As Total organic carbon	Not to exceed 20 mg/Nm^3
4	Dust	Inert dust including cement	Not to exceed 250 mg/Nm^3
5	Nitrogen oxides NO_x (To be reported as NO_2)	LCP using solid fuel with thermal effect of: 50 to 500 MWth	450 mg/Nm^3
		>500 MWth	400 mg/Nm^3
		LCP using liquid fuel with thermal effect of: 50 to 500 MWth	300 mg/Nm^3
		>500 MWth	200 mg/Nm^3
6	Lead	Not to exceed 5 tonne/year of lead or lead compounds (measured as elemental lead) emitted by a stationary source	

4.1.1.4 Vehicle, Motorcycle and Moped Emission Standards in Tanzania

This Tanzania standard gives permissible limits of some common substances found in exhaust emissions of motor vehicles, namely carbon monoxides, suspended particulate matter (PM), oxide of nitrogen and hydrocarbons. The standard covers all types of vehicles namely; passenger cars,

light commercial vehicles, heavy-duty vehicles, and two and four strokes motor cycles and scooters. For the purpose of this standards, ambient air mean an outdoor air to which people, plants, animals and material may be exposed while suspended particulate matter mean airborne particles of 10microns or less in diameter which is also the inhalable fraction (PM 10). Smoke mean visible (black) aerosol usually resulting from combustion and emission limit is the highest permissible quantity of pollutants released into the air from a pollution source, expressed as the concentration of pollutants in relation to one unit of production or to the degree of air pollution caused by these sources (e.g. dark colour of smoke). The emission limit standards for vehicles in Tanzania are shown in Table 4 while those for motorcycles and mopeds are presented in Table 5.

Table 4: Vehicle emission standards in Tanzania

Vehicle category	Emission limits (grams per kilometre)						
	THC	HC + NO_x	CO	HC	NO_x	PM_{10}	Smoke ϰ
Light duty vehicles (<2,7272 kg)	1.1	-	2.0 -8.0	0.3 -1.0	0.6 -5.0	0.05-0.29	-
Medium duty vehicles (3000-3,857 kg)	1.9	-	8.75-11.2	0.63-1.2	1.43-5.0	0.05-0.29	-
Heavy duty vehicles (>3,857 kg)	1.3	10	11.2-15.5	1.2-3.5	5.0-18.0	0.07-0.15	2.5

Table 5: Emission standards for motorcycles and mopeds in Tanzania

Type of motorcycle/mopeds	Emission limit (grams per kilometre)		
	CO	NO_x	HC
Motorcycle, 2 stroke engine <100 kilograms	12.8-16.0	0.1-2.0	3-12.0
Motorcycle, 2 stroke >300 kilograms	32.0-40.0	0.1-20	15.0
Motorcycle, 4 stroke <100 kilograms	17.5-25.0	0.3	7.0
Motorcycle, 4 stroke >300 kilograms	35.0-50.0	0.3	10.0
Two wheel moped	8.0	0.1	5.0
Three wheel moped	15.0	0.1-0.2	10.0

4.1.1.5 Water Quality Standards in Tanzania

This standard prescribed the quality requirements for drinking portable water. It does not include the requirements for natural mineral water. All supplies of drinking water are required to be pleasant and safe to drink. Absence of turbidity and absence of colour, palatable and acceptable, taste and odour are of utmost importance in public supplies of drinking water. The situation, construction, operation and supervision of water supply, its reservoirs and its distribution systems shall in such that they exclude any possible contamination of the water. The water quality standards are summarised in the following tables. The water quality standards for microbiological and physical and chemical limits are shown in the table below.

Microbiological quality standards for drinking water in Tanzania

The microbiological quality standards for drinking water are shown in Table 6.

Table 6: Microbiological quality standards for drinking water in Tanzania

Class of piped water	Coli form count per 100 ml at 37°C	E. Coli (faecal coliform) count per 100 ml at 44°C
Excellent	0	0
Satisfactory	1-3	0
Suspicious	4-10	0
Unsatisfactory	More than 10	1 or more

Chemical and physical limits for quality of drinking water supplies in Tanzania

The chemical and physical limits for quality of drinking water supply are shown in Table 7.

Table 7: Chemical and physical limits for quality of drinking water supplies in Tanzania

Group	Substance	Unit	Lower limit	Upper limit
Toxic	Lead, Pb	mg/L	-	0.1
	Arsenic, As	mg/L	-	0.05
	Selenium, Se	mg/L	-	0.05
	Chromium, Cr 6+	mg/L	-	0.05
	Cyanide, CN	mg/L	-	0.20
	Cadmium, Cd	mg/L	-	0.05
	Barium, Ba	mg/L	-	1.0
	Mercury, Hg	mg/L	-	0.001
	Silver, Ag	mg/L	-	n.m
Affecting human health	Fluoride, F	mg/L	1.5	4.0
	Nitrate, NO_3	mg/L	10.0	75.0
Organoleptic	Colour	TCU	1.5	50
	Turbidity	NTU	5	25
	Taste	-	n.o	-
	Odour	-	n.o	-
Salinity and hardness	pH	-	6.5	9.2
	Total filterable residue	mg/L	500	2000
	Total hardness ($CaCO_3$)	mg/L	500	600
	Calcium, Ca	mg/L	75	300
	Magnesium, Mg	mg/L	50	100
	Magnesium + sodium	mg/L	500	1000
	Sulphate, SO_4^{2-}	mg/L	200	600
	Chloride, Cl^-	mg/L	200	800
Organic pollution of natural origin	BOD (5 days at 30°)	mg/L	6.0	6,0
	PV (oxygen abs $KMnO_4$)	mg/L	10	20
	Ammonium (NH_3 + NH_4^+)	mg/L	2.0	2.0
	Total nitrogen (excluding NO_3)	mg/L	1.0	1.0
Organic pollution induced artificially	Surfactants (alkali benzyl sulphonates)	mg/L	1.0	2.0
	Organic matter (as carbon in chloroform extract)	mg/L	0.5	0.5
	Phenolic substances (as phenol)	mg/L	0.002	0.002

N.B: n.o = not objectionable; n.m = not mentioned

4.1.1.6 Standards for Effluents and Receiving Waters in Tanzania

The purpose of the standard is to indicate the quality of effluents permitted to be discharged into water bodies. The use therefore is meant to promote a consistent approach towards prevention of

water pollution in Tanzania. The standard does not cover requirements for hazardous effluents such as radioactive materials and hospital wastes. For the purpose of application of this standard, pollution is defined as the introduction by man, directly or indirectly, or substances or energy into the environment resulting in deleterious effects of such a nature as to endanger human health, harm leaving resources and ecosystems, and impair or interfere with amenities and other legitimate uses of the environment. Receiving water is defined as a perennial body of water, stream and watercourse receiving the discharged effluent and effluent as water or wastewater discharged from a containing space such as treatment plant, industrial process, lagoon, etc. Hazardous wastes is defined as any discarded material containing substances known to be toxic, mutagenic, carcinogenic, or teratogenic to humans or other life forms; ignitable, explosive, or highly reactive alone or with other materials and water pollution as the impairment of suitability of water from some considered purpose. The standards for effluents and receiving water in Tanzania are shown in Table 8.

Table 8: Standards for effluents and receiving waters in Tanzania

Parameter	**Unit**	**Effluent Standard**		**Standard for receiving water**			
		TCL	**MPC**	**TL**	**MPC 1**	**MPC 2**	**MPC 3**
PH		-	6.5-8.5	-	6.5-8.5	6.5-8.5	6.5-9.0
TDS	mg/l	2500	3000	1700	2000	2000	2000
TSS	mg/l	60	100	-	-	-	-
Conductivity	uS/cm^3	400	-	-	-	-	-
BOD_5	mg/l	25	30	3.5	5	5	10
COD	mg/l	45	60	-	-	-	-
Chloride-Cl	mg/l	650	800	170	200	200	400
Sulphate-SO_4	mg/l	500	600	500	600	600	600
Ammonia-N	mg/l	7.5	10	0.35	0.5	0.5	0.5
Nitrate- N	mg/l	35	50	35	50	50	100
TDS	mg/l	2500	3000	1700	2000	2000	2000
TSS	mg/l	60	100	-	-	-	-
Conductivity	uS/cm^3	400	-	-	-	-	-
BOD_5	mg/l	25	30	3.5	5	5	10
COD	mg/l	45	60	-	-	-	-
Chloride-Cl	mg/l	650	800	170	200	200	400
Sulphate- SO_4	mg/l	500	600	500	600	600	600
Ammonia-N	mg/l	7.5	10	0.35	0.5	0.5	0.5
Nitrate-N	mg/l	35	50	35	50	50	100
Nitrite-N	mg/l	0.75	I	-	-	-	-
Phosphate-PO_4	mg/l	4.5	6	-	-	-	-
Cyanide-total	mg/l	0.75	I	0.035	0.5	0.5	0.1
Cyanide –WAD	mg/l	0.35	0.5	-	-	-	-
Cyanide – Free	mg/l	0.075	0.1	-	-	-	-
Oil & Grease	mg/l	3.5	5	0.35	0.5	I	5
Phenols	mg/l	0.15	0.2	0.0015	0.002	0.002	0.1
Total hydrocarbons (dissolved & emulsified)	mg/l	-	-	-	-	-	-
Arsenic	mg/l	0.15	0.2	0.04	0.05	0.1	0.1
Cadmium	mg/l	0.075	0.1	0.04	0.GS	0.1	0.2
Chromium (total)	mg/l	0.75	1	-	-	-	-
Chromium (hex)	mg/l	0.05	0.1	0.04	0.05	0.1	0.1

Copper	mg/l	0.75	1	2.5	3	3	4
Iron (total)	mg/l	2	3	0.75	I	1.2	1.5
Lead	mg/l	0.075	0.1	0.075	0.1	0.1	0.2
Mercury	mg/l	0.004	0.005	0.00075	0.001	0.001	0.002
Nickel	mg/l	0.4	0.5	0.04	0.05	0.05	0.1
Zinc	mg/l	0.75	1	0.15	0.2	0.2	0.5

Note:

TL = Trigger level, which if exceeded, requires investigation of a potential problem and action if necessary; the level acts as a warning.

4.1.1.7 Noise Standards in Tanzania

This Tanzania Standard specifies limits for environmental noise only. It is not applicable for noises in the occupational environment. It is therefore defined noises as any unwanted and annoying sound that is intrinsically objectionable to human beings or which can have or is likely to have an adverse effect on human health or the environment and noise pollution as the release of uncontrolled noise that is likely to cause danger to human health or damage to the environment. Environmental noises (also called community noise, residential noise or domestic noise) are defined as noise emitted from all sources except noise at the industrial workplace. A sound is a fluctuation in a pressure, particle displacement, or particle velocity propagated in any medium or the auditory sensation that may be produced. The other definition are C-weighted sound level which is a standard weighting of the audible frequencies used for the measurement of Peak Sound Pressure level. dBA unit in decibel for an A-weighted sound level (for quite sounds). dBC unit in decibel for a C-weighted sound level while decibel a unit used to express the intensity of a sound wave. This intensity in dB is equal to 20 times the common logarithm of the ratio of the pressure produced by the sound wave reference pressure (typically 1 micropascal at 1 meter).

Classification of land use categories in Tanzania

The classification of land use categories is summarised in Table 9.

Table 9: Classification of Land Use Categories in Tanzania

Class	Land use category	Description
Type A	Institutional areas	Areas where quietness required and where welfare institutions are concentrated (Hospitals, Public courts, etc)
Type B	Residential/ Institutional	Areas with both residential and institutional buildings and areas with open and low density buildings as well as apartment houses (e.g. schools, offices, etc)
Type C	Recreational areas	Areas with recreational centres and houses, recreational areas for public use and nature reserve areas
Type D	Residential/ Commercial	Areas allocated for both residential and commercial activities such as shopping / market areas, etc
Type E	Trade/Commercial/ Residential	Includes light industry, stores, repair shops, etc Unplanned areas without strong connection between trade and owners of dwellings City centre areas with high concentration of shops (Central Business District)
Type F	Industrial areas	Areas allocated exclusively for industrial activities for which it is difficult or very costly to reduce noise
Type G	Open country/ Undeveloped lands	Agricultural areas/rangelands

Standard Noise Values for Different Types of Land Use Categories in Tanzania

The standard noise values for different types of land use categories is summarised in Table 10.

Table 10: Standard noise values for different types of land use categories in Tanzania

Area	Standard Value (dBA)	
	Day Time	Night Time
Type A	50 or less	40 or less
Type B	50 or less	45 or less
Type C	55 or less	45 or less
Type D	60 or less	50 or less
Type E	65 or less	55 or less
Type F	70 or less	70 or less

Noise Standards for Areas Facing Roads in Tanzania

The noise standards for areas facing roads is summarised in Table 11.

Table 11: Noise standards for areas facing roads in Tanzania

Area class	Standard value (dBA)	
	Day Time	Night Time
Area Type A facing roads with two or more lanes	50 or less	45 or less
Area Type B facing roads with two or more lanes and Areas Type C facing a road with one or more lanes	55 or less	45 or less

Note: Lane = refers to a longitudinal strip of road with uniform width to enable a single line of cars to travel safely and without hindrance

Noise Emission Standards for Construction Equipment and Small and Large Vehicles in Tanzania

The noise standards for construction equipment and small and large vehicles is summarised in Table 12.

Table 12: Noise emission standards for construction equipment and small and large vehicles in Tanzania

Equipment/Vehicle	Noise limit (dBA)
Small motorbike or scooter	80
Passenger car	82
Small bus or commercial vehicle	85
Medium bus or commercial vehicle	89
Large bus or commercial vehicle	91
Compactors (rollers), front loaders, concrete mixers, cranes (movable)	75
Dozers, graders, trucks, jack hammers	75

For noise measurements reporting the following information based on ISO 1996 shall be mandatory:

- The purpose of the measurement
- The standard used
- Equipment used, including serial numbers
- Map showing position of sound

4.1.1.8 Soil Standards in Tanzania

This Tanzania Standard sets limits for soil contaminants in agriculture and habitat. In the application of these standards it is therefore defined Contaminated soil as soil which contains one or more contaminants from an unintentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous substance, hazardous waste, or pollutant while Degraded land is the land which, due to natural processes or human activity, is no longer able to properly sustain an economic function and/or its original natural, or near-natural, ecological function and
Degraded soil is the one whose natural properties or productivities have been damaged by contamination or physical or other processes.

Soil upper layer of the earth's crust composed of mineral parts, organic substance, water, air and living water. Subsoil Volume underlying the topsoil and overlying the solid (parent) rock beneath. Topsoil Upper part of natural soil which is generally darker in colour and has higher content of organic substances and nutrient when compared to the subsoil underneath.

It is the requirement that the contaminant in habitat and agriculture soil have the following limits as specified in the following tables.

Contaminant Limits for Volatile Organic Compounds in Tanzania

The contaminant limits for volatile organic compounds is shown in Table 13.

Table 13: Contaminant Limits for Volatile Organic Compounds in Tanzania

S/N	Parameter	Upper limit (mg/kg)	Test method
1	Benzene	5	TZS 973-ISO 15009
2	Carbon Tetrachloride	5	***
3	1,2- Dichloromethane	5	TZS 973-ISO 15009
4	1,1- Dichloromethane	0.5	TZS 973-ISO 15009
5	cis-1,2- Dichloromethane	40	***
6	trans-1,2-Dichloromethane	60	***
7	Dichloromethane	90	TZS 973-ISO 15009
8	Ethyl benzene	200	TZS 973-ISO 15009
9	Styrene	1,000	***
10	Tetrachloroethylene	50	***
11	Toluene	500	ISO 15009:2002 (E) TZS 973
12	Trichloroethane	30	***
13	1,1,1- Trichloroethane	600	TZS 973-ISO 15009
14	1,1,2-Trichloroethane	10	TZS 973-ISO 15009
15	Total Xylenes	200	TZS 973-ISO 15009

Contaminant Limits for Heavy Metals in Tanzania

The contaminant limits for heavy metals is shown in the Table 14.

Table 14: Contaminant Limits for Heavy Metals in Tanzania

S/N	Parameter	Upper limit (mg/kg)	Test method
1	Arsenic	1	***
2	Cadmium	1	TZS 974-ISO 11047
3	Hexavalent Chromium	100	TZS 974-ISO 11047
4	Lead	200	TZS 974-ISO 11047
5	Manganese	1,800	TZS 974-ISO 11047
6	Mercury	2	TZS 974-ISO 11047
7	Nickel	100	TZS 974-ISO 11047
8	Selenium	20	***
9	Copper	200	TZS 974-ISO 11047
10	Zinc	150	TZS 974-ISO 11047
11	Molybdenum	5	***

Contaminant Limits for Pesticides in Tanzania

The contaminant limits for pesticides is summarised in Table 15.

Table 15: Contaminant Limits for Pesticides in Tanzania

S/N	Parameter	Upper limit(mg/kg)	Test method
1	Atrzine	50	TZS 976-ISO 11264
2	2,4-Dichlorophenox acetic acid (2,4-D Amine)	700	***
3	2,4-Dichlorophenox acetic acid Amine (2,4-D Amine)	700	***
4	Lindane	2	GC (AOAC Methods,1984, JAOAC, 1980, Pesticides Analytical Manual, 1979)
5	Pentachlorophenol	20	TZS 977-ISO 10382
6	Sulphur	500	Titrimetry (CIPAC Handbook)
7	Endosulfan	60	GC with MCD or ECD (Analytical Methods Residue Pesticides, 1988, Part 1)
8	Glyphosate	700	HPLC (Pesticide Analytical Manual,1999 II)
9	Acetochlor	500	GC With ECD or FID
10	Carbofuran	200	GC (Analytical Methods Residue Pesticides, 1988, Part 1)
11	Paraquat	300	Colorimetry (Pesticides Analytical Manual, 1979 II)
12	Diquat	150	Colorimetry (Pesticides Analytical Manual, 1979 II, Analytical Methods Plant Growth Regulators, 1978)
13	**Chlordane	0.6	***
14	*DDT	3	TZS 977-ISO 10382
15	**Dieldrin	0.05	TZS 977-ISO 10382
16	**Heptachlor	0.2	TZS 977-ISO 10382
17	**Toxaphene	0.6	***
18	**Aldrin	0.05	TZS 977-ISO 10382
19	**Hexachlorobenzene	500	TZS 977-ISO 10382

Contaminants Limits for Other Chemicals in Tanzania

The contaminants limits for other chemicals is summarised in Table 16.

Table 16: Contaminants Limits for Other Chemicals in Tanzania

S/N	Parameter	Upper limit(mg/kg)	Test method (see clause 2)
1	Benzo (a) pyrene	1.0	***
2	Cyanide	10	TZS 977-ISO 10382
3	Polychlorinated Biphenyls (PCBs)	1.0	TZS 977-ISO 10382
4	Vinyl Chloride	1.0	***
5	Polychlorinated Dibenzo Dioxins	100ng TEQ/kg	***

4.1.2 Uganda

4.1.2.1 Standards for Discharge of Effluent into Water or on Land in Uganda

In Uganda, the government established the National Environment (Standards for Discharge of Effluent into Water or on Land) Regulations, 1999. In Uganda "effluent" means waste water or other fluid of domestic agricultural trade or industrial origin, treated or untreated and discharged directly or indirectly into the aquatic environment and "pollution" means any direct or indirect alteration of the physical, thermal, chemical, biological or radioactive properties of any part of the environment by discharging, emitting or depositing wastes so as to affect any beneficial use adversely, to cause a condition which is hazardous or potentially hazardous to public health, safety or welfare, or to animals, birds, wildlife, fish or aquatic life, or to plants or to cause a contravention of any condition, limitation or restriction which is subject to a licence under the Uganda Act. Table 17 shows the standards for discharge effluent in Uganda.

Table 17: Standards for Discharge of Effluent or Wastewater in Uganda

Parameter		Maximum permissible limits
1.	1,1,1, -trichloroetrhane	3.0 mg/l
2.	1,1,2, -dichloroethyelene	0.2 mg/l
3.	1,1,2, - trichloroethne	1.06 mg/l
4.	1,2 – dichloroethane	0.04 mg/l
5.	1,3 – dichloropropene	0.2 mg/l
6.	Aluminium	0.04 mg/l
7.	Ammonia Nitrogen	10mg/l
8.	Arsenic	0.2 mg/l
9.	Barium	10 mg/l
10.	Benzene	0.2 mg/l
11.	BOD_5	50 mg/l
12.	Boron	5 mg/l
13.	Cadmium	0.1 mg/l
14.	Calcium	100 mg/l
15.	Chloride	500 mg/l
16.	Chlorine	1.0 mg/l
17.	Chromium(total)	.0 mg/l
18.	Chromium VI	0.05 mg/l

19.	Cirrus 1,2 –dichloroethylene	mg/l
20.	Cobalt	mg/l
21.	COD	100 mg/l
22.	Clifford organisms	1,000 counts/100 ml
23.	Colour	TCU
24.	Copper	1.0 mg/l
25.	Cyanide	0.1 mg/l
26.	Detergents	10 mg/l
27.	Dichloromethane	0.2 mg/l
28.	Iron	10 mg/l
29.	Lead	0.1 mg/l
30.	Magnesium	100 mg/l
31.	Manganese	1.0 mg/l
32.	Mercury	0.01 mg/1
33.	Nickel	1.0 mg/1
34.	Nitrite - N	20 mg/1
35.	Nitrite – N	2.0 mg/1
36.	Nitrogen total	10 mg/1
37.	Oil and Grease	10 mg/1
38.	pH	6.0-8.0
39.	Phenols	0.2 mg/1
40.	Phosphate (total)	10 mg/1
41.	Phosphate (soluble)	5.0 mg/1
42.	Selenium	1.0 mg/1
43.	Silver	0.5 mg/1
44.	Sulfate	500 mg/1
45.	Sulfide	1.0 mg/1
46.	TDS	1200 mg/1
47.	Temperature	350C
48.	Tetra Cholera ethylene	0.1 mg/1
49.	Tetrachloromethananc	0.02 mg/1
50.	Tin	5 mg/1
51.	Total Suspended Solids	100 mg/1
52.	Tricholoroethylene	0.3 mg/1
53.	Turbidity	300 NTU
54.	Zinc	5 mg/1

4.1.2.2 Management of Ozone Depleting Substances and Products in Uganda

The government of Uganda established the standards for Management of Ozone Depleting Substances and Products in 2001. "Ozone" means the natural gas that is found in the stratosphere; "Ozone" Layer" means the layer of the atmospheric zone above the plenary boundary as defined in the Vienna Convention for the Protection of the Ozone Layer "Controlled product" means a product that contains, is made with or is dependent on or designed to contain a controlled substance and includes the products in the First Schedule; "Controlled substance" means a substance specified in the second Schedule, whether existing alone or in a mixture, and includes that substance when reclaimed, recycled or recovered unless otherwise indicated. Table 18 shows the controlled substances and prohibited dates in Uganda.

Table 18: Controlled Substances and Prohibition Dates in Uganda

Item	Controlled substances		Date of prohibition of import/export
Hydrobromofluorocarbons	(HBFCs)		Jan 1, 2002
Choroflurocarbons CFC-11 CFC-12	(CFCs) CFC-113 CFC-114	CFC-115	Jan 1, 2010
Halons halon 1211			Jan 1, 2010
	halon 1301	halon 2402	
Other fully halogenated Choroflurocarbons (CFCs) CFC-13 CFC-111 CFC-112			Jan 1, 2010
	CFC-122	CFC-212	
	CFC-213	CFC-214	
	CFC-215	CFC-216	
Carbon tetrachoride			Jan 1, 2010
1,1, 1 - trichloroethane (methyl chloroform)			Jan 1, 2015
Hydrochlorofluorocarbons (HCFCs)			Jan 1, 2040
Methyl bromide			Jan 1, 2015

4.1.2.3 Minimum Standards for Management of Soil Quality

In 2001, the Government of Uganda established the minimum standards for management of soil quality. In Uganda the establishment of minimum standard of soil quality is the minimum standard of soil required for the agricultural practice. The soil parameters considered are for; Parameters for rain-fed agriculture, Parameters for irrigated agriculture, Parameters for wetland rice systems under natural flooding, Parameters for wetland rice under irrigated systems and Soils to be used only with conservation measures.

The soil quality standards for management of soil quality in Uganda under different agriculture practices are summarized in Tables 19 to 22.

Table 19: Soil quality parameters and classes for rain-fed agriculture in Uganda

Column I	Column II	Column III	Column IV	Column V	Column VI
Soil quality parameter	**Class I Prime**	**Class II good**	**Class III medium**	**Class IV marginal**	**Class VI unsuitable**
1. Bulk density (upper limit) of / cm^3	1.25	1.3	1.5	1.65 or 1.25 (wetlands)	High
2. Porosity (Vol. %)	53	51	43	38 or 53 (wetlands)	Low
3. WHC (mm of H2O/m soil)	>150	130 -150	100 -130	<100	Low
4. Infiltration Rate (mm/hr)	60 -100	40 -60	40 -10	<10	Low
5.Permeability (mm/hr)	50 -80	40 -50	40 -10	<10	Low
6. Slope (%)	0_ 3	3 _ 8	8 _ 13	13 – 20	>20
7. Stoniness (vol%)	<0.1 (>30m apart)	0.1 (10-30m apart)	<1 (10-30 m)	1-3 (10-30m apart)	>15% of the surface covered
8. Soil depth (cm)	>100	75-100	75-20	<20 cm	Very shallow
9. Flooding and duration (monthly/year)	N.L.	N.L.	Slight to moderate >1-2	Moderate to severe 2-4	Very severe (>4)
10. Depth to water table (cm)	N.L. >150	N.L. 100 - 150	Slight limit. 50 - 100	Shallow 25 - 50	Shallow 0 - 25

N.L. Not Limiting. WHC Water Holding Capacity.

Note: 1. Prime agricultural land, which is high value land with least management problems apart from nutrients management. 2. Good agricultural land. 3. Medium agricultural land. 4. Marginal/fragile agricultural land. 5. Low value/unsuitable agricultural land.

Table 20: Soil quality parameters and classes for irrigated agriculture in Uganda

Column I	Column II	Column III	Column IV	Column V	Column VI
Soil quality parameter	**Class I suitable**	**Class II moderately suitable**	**Class III marginally suitable**	**Class IV potentially suitable**	**Class VI unsuitable**
1. Slope (%)	<2	2 – 5	5 – 8	8 – 12	> 12
2. Wetness					
- flooding	N.F.	Slight or less	-	-	-
-internal drainage	Mod.	Mod. Rapid	Slow to very rapid	Slow to very rapid	Very slow to
-natural drainage	Good	Good	Mod.	Imperfect	Very Poor
3. Physical					
-top soil texture (0-25 cm)	Sl-CL	LS-C	S-C	S-C	CM to S
-sub-soil texture (25-100 cm)	Sl-CL	LS-C	LS-C	S-C	CM to S

-surface stoniness (vol%)	<0.01	0.01 - 0.1	0.1 - 3.0	3-15	>15
- subsurface coarse fragments (vol%)	0.5	5-15	15-30	20-25	>25
4.Salinity/alkalinity (75-100 cm)					
-Ec mmhos/cm	<1	1-4	4-8	8-15	>15
-ESP (0-100 cm)	<4	4-10	10-20	20-25	>25

Table 21: Soil quality parameters and classes for wetland rice systems under natural flooding in Uganda

Column I	**Column II**	**Column III**	**Column IV**	**Column V**	**Column VI**
Soil quality parameter	**Class I – suitable**	**Class II moderately suitable**	**Class III marginally suitable**	**Class IV potentially suitable**	**Class VI unsuitable**
1. Slope (%)	N.L.	<2	<4	<6	<8
2. Wetness					
- flooding	3-4 months	3-4 months	<2 months	<1 month	Too short
- drainage	Poor	Poor to imperfect	V.Poor - moderate	V. Poor - operate	V. Poor
3. Physical					
- surface text/ texture	CM to SiCs	CM to SCL	CM to Sf	CM to Sf	CM to Sc
- sub-surface text	CM to LSf	CM to Sc	--	--	--
4.Salinity/alkalinity (75-100 cm)					
- Ec mmhos/cm	<1	<4	<6	<6	<6
- ESP (0-100 cm)	<4	<10	<20	<25	<25

Note: CM: Massive Clay. SiCs: Silty Clay Blocky. SCL: Sandy Clay Loam. Sf: Fine Sand. Sc: Coarse Sand.LSf: Loamy Fine Sand. N.L: Not Limiting. V.P: Very Poor. MO: Months.

Table 22: Soil quality parameters and classes for wetland rice under irrigated systems in Uganda

Column I	**Column II**	**Column III**	**Column IV**	**Column V**	**Column VI**
Soil quality parameter	**Class I suitable**	**Class II moderately suitable**	**Class III marginally suitable**	**Class IV potentially suitable**	**Class VI unsuitable**
1. Slope (%)	<1.	<2	<3	<4	<5
2. Wetness					
- flooding	N.L.	N.L.	3-4 months	3-4 months	Too short or too long
- drainage	Mod. to IP	Good to poor	Good to V.P	--	--

3. Physical					
-surface texture	CM to SiCs	CM to SCL	CM to Sf	CM to Sf	CM to Sc
- sub-surface text	CM to LSf	CM to Sc	--	--	--
4.Salinity/alkalinity (75-100 cm)					
-Ec mmhos/cm	<2	<4	<6	<6	<6
- ESP (%)	<5	<10	<20	<35	<35

Note: CM: Massive Clay. SiCs: Silty Clay Blocky. SCL: Sandy Clay Loam. Sf: Fine Sand. Sc: Coarse Sand.LSF: Loamy Fine Sand. N.L: Not Limiting. V.P: Very Poor. IP: Impermeable.

4.1.2.4 Noise Standards and Control in Uganda

In 2003, the Government of Uganda established the Noise Standards and Control. In Uganda, "noise" means any unwanted and annoying sound that is intrinsically objectionable to human beings or which can have or is likely to have an adverse effect on human health or the environment; and "noise pollution" means the release of uncontrolled noise that is likely to cause danger to human health, or damage to the environment. "sound" means a fluctuation in pressure, particle displacement, or panicle velocity propagated in any medium, or the auditory sensation that may be produced "dBA" means the unit in decibels on the A scale for quiet sounds;"decibels" means a dimensionless unit used in comparison of the magnitude of sound pressures or powers. In Uganda, the areas where the permissible noise levels are focusing on include:

- continuous or intermittent noise from a factory or a workshop
- impact or impulsive noise
- construction site
- public announcement system or address system
- place of entertainment or establishment
- place or area of worship
- an accelerating vehicle and
- a quarry or mine

Maximum Permissible Noise Levels for different categories in Uganda are summarized in Tables 23 to 30.

Table 23: Maximum Permissible Noise Levels for General Environment in Uganda

Column 1	Column 2	
Facility	Noise limits **B (A) (Leq)**	
	DAY	NIGHT
A. Any building used as hospital, convalescence home, home for the aged, sanatorium and institutes of higher learning, conference rooms, public library, environmental or recreational sites.	45	35
B. Residential buildings	50	35
C. Mixed residential (with some commercial and entertainment)	55	45
D. Residential + industry or small-scale production + commerce	60	50
E. Industrial	70	60

Time Frame: use duration
Day : 6.00 a.m - 10.00p.m.
Night : 10.00p.m - 6.00a.m
The time frame takes into consideration human activity.

Table 24: Maximum Permissible Noise Levels (Continuous or intermittent noise) from a Factory or Workshop in Uganda

Column 1	Column 2	Column 3
Leg dB (A)	Duration(daily)	Duration(weekly)
85	8 hours	40 hours
88	4 hours	200 hours
91	2 hours	10 hours
94	1 hours	5 hours
97	30 minutes	2.5 hours
100	15 minutes	1.25 hours
103	7.5 minutes	37.5 hours
106	3.75 minutes	18.75 minutes
109	1.875 minutes	9.375 minutes

Noise Levels shall not exceed a Leq of;
(i) Factory/Workshops 85 dB (A)
(ii) Offices 50 dB (A)
(iii) Factory/Workshop Compound 75 dB (A).

Table 25: Maximum Permissible Noise Levels for Impact or Impulsive Noise in Uganda

Column 1	Column 2
Sound level Db(A) (Lmax)	**Permitted number of impulses or impacts per day**
140	100
130	1000
120	10000

Table 26: Maximum Permissible Noise Levels for Construction Site in Uganda

Column 1	Column 2	
Noise Control Zone	Sound Level Db(A) (Leq)	Sound Level Db(A) (Leq)
	Day	Night
Residential	60	40
Commercial	75	50
Industrial	85	65

Time Frame:
Day : 6.00 a.m - 10.00p.m.
Night : 10.00p.m - 6.00a.m
The time frame takes into consideration human activity.

Table 27: Maximum Permissible Noise Levels for Places or Establishments of Entertainment in Uganda

Column 1	Column 2	
Noise Control Zone	Sound Level Db(A) (Leq)	Sound Level Db(A) (Leq)
	Day	Night
Residential	60	40
Commercial	75	50
Industrial	85	65

Time Frame:
Day: 6.00 a.m - 10.00p.m.
Night: 10.00p.m - 6.00a.m
The time frame takes into consideration human activity.

Table 28: Maximum Permissible Noise Levels for Places or Areas of Worship in Uganda

Column 1	Column 2	
Noise Control Zone	Sound Level Db(A) (Leq)	Sound Level Db(A) (Leq)
	Day	Night
Residential	60	40
Commercial	75	50
Industrial	85	65

Time Frame:
Day: 6.00 a.m - 10.00p.m.
Night: 10.00p.m - 6.00a.m
The time frame takes into consideration human activity.

Table 29: Maximum Permissible Noise Levels for Accelerating Vehicles in Uganda

	Column 1	Column 2
1	Vehicles intended for carriage of passengers and equipped with not more than nine seats, including the driver's seat	78
2	Vehicles intended for carriage of passengers, and equipped with not more than nine seats, including the drivers seat and having maximum permissible mass of more than 3.5 tones	
	a) - with an engine power of more than 150 KW	80
	b) - with an engine power of less than 150 KW	83
3	Vehicles intended for carriage of passengers and equipped with more than nine seats including the drivers seat: vehicles intended for carriage of goods	
	a) - with a maximum permissible mass not exceeding 2 tonnes	79
	b) - with a maximum permissible mass exceeding 2 tonnes but not exceeding 3.5 tonnes	80
4	Vehicles intended for the carriage of goods and having a maximum permissible mass exceeding 3,5 tonnes	
	a) -with an engine power of less than 75 KW	81
	b) -with an engine power of not less than 75 KW but less than 150KW	83
	c) -with an engine power of not less than 150 KW	84

Table 30: Maximum Permissible Noise Levels for Mines and Quarries in Uganda

Column 1	Column 2
Facility	**Limit value in dB (C)**
1. For any building used as a hospital, school, convalescent home, old age home or residential building	109dB (C)
2 For any building in an area used for residential and one or more of the following purposes: Commerce, small-scale production, entertainment, or any residential apartment in an area that is used for purposes of industry, commerce or small-scale production, or any building used for the purpose of industry, commerce or small-scale production.	114dB (C)

4.1.3 Kenya

In 2006, the Kenya Government established the Water Quality Standards. In these standards, there are six (6) categories that were established, namely; Quality Standards for Sources of Domestic Water, Standards for Effluent Discharge into the environment, Standards for effluent Discharge into Public Sewers, Microbiological Quality Guidelines for Wastewater used in Irrigation, Standards for Irrigation Water, Quality Standards for Recreational waters.

4.1.3.1 Protection of Sources of Water for Domestic Use in Kenya

In Kenya every person shall refrain from any act which directly or indirectly causes, or may cause immediate or subsequent water pollution, and it shall be immaterial whether or not the water resource was polluted before the enactment of these Regulations and that no person shall throw or cause to flow into or near a water resource any liquid, solid or gaseous substance or deposit any such substance in or near it, as to cause pollution.

4.1.3.2 Water for Industrial Use and Effluent Discharge in Kenya

In Kenya, no person is allowed to use water for trade or industrial undertaking unless such person complies with the standards established by the competent lead agency in regard to that particular activity. Moreover, no person is allowed to discharge or apply any poison, toxic, noxious or obstructing matter, radioactive waste or other pollutants or permit any person to dump or discharge such matter into the aquatic environment unless such discharge, poison, toxic, noxious or obstructing matter, radioactive waste or pollutant complies with the standards set out.

It is however insisted that every local authority or person operating a sewage system or owner or operator of any trade or industrial undertaking issued with an effluent discharge license as stipulated under the Act shall comply with the standards set out.
The different categories of water quality standards in Kenya are summarized in Tables 31 and 32.

Table 31: Quality Standards for Sources of Domestic Water in Kenya

Parameter	**Guide Value (maximum allowable)**
pH	6.5 – 8.5
Suspended solids	30 (mg/L)
Nitrate-NO_3	10 (mg/L)
Ammonia –NH_3	0.5 (mg/L)
Nitrite –NO_2	3 (mg/L)

Total dissolved solids	1200 (mg/L)
E.coli	Nil/100 ml
Fluoride	1.5 (mg/L)
Phenols	Nil (mg/L)
Arsenic	0.01 (mg/L)
Cadmium	0.01 (mg/L)
Lead	0.05 (mg/L)
Selenium	0.01 (mg/L)
Copper	0.05 (mg/L)
Zinc	1.5 (mg/L)
Alkyl benzyl sulphonates	0.5 (mg/L)
Permanganate value (PV)	1.0 (mg/L)

Table 32: Standards for Effluent Discharge into the Environment in Kenya

Parameter	**Maximum Allowable(Limits)**
1,1,1-trichloroethane (mg/l)	3
1,1,2-trichloethane (mg/l)	0.06
1,1-dichloroethylene	0.2
1,2-dichloroethane	0.04
1,3-dichloropropene (mg/l)	0.02
Alkyl Mercury compounds	Nd
Ammonia, ammonium compounds, NO_3 compounds and NO_2 compounds (Sum total of ammonia-N times 4 plus nitrate-N and Nitrite-N) (mg/l)	100
Arsenic (mg/l)	0.02
Arsenic and its compounds (mg/l)	0.1
Benzene (mg/l)	0.1
Biochemical Oxygen Demand (BOD 5days at 20 ^oC) (mg/l)	30
Boron (mg/l)	1.0
Boron and its compounds – non marine (mg/l)	10
Boron and its compounds –marine (mg/l)	30
Cadmium (mg/l)	0.01
Cadmium and its compounds (mg/l)	0.1
Carbon tetrachloride	0.02
Chemical Oxygen Demand (COD (mg/l)	50
Chromium VI (mg/l)	0.05
Chloride (mg/l)	250
Chlorine free residue	0.10
Chromium total	2
cis –1,2- dichloro ethylene	0.4
Copper (mg/l)	1.0
Dichloromethane (mg/l)	0.2
Dissolved iron (mg/l)	10
Dissolved Manganese(mg/l)	10
E.coli (Counts / 100 ml)	Nil
Fluoride (mg/l)	1.5
Fluoride and its compounds (marine and non-marine) (mg/l)	8
Lead (mg/l)	0.01
Lead and its compounds (mg/l)	0.1

n-Hexane extracts (animal and vegetable fats) (mg/l)	30
n-Hexane extracts (mineral oil) (mg/l)	5
Oil and grease	Nil
Organo-Phosphorus compounds (parathion,methyl parathion,methyl demeton and Ethyl parantrophenyl	1.0
phenylphosphorothroate, EPN only) (mg/l)	
Polychlorinated biphenyls, PCBs (mg/l)	0.003
pH (Hydrogen ion activity----marine)	5.0-9.0
pH (Hydrogen ion activity--non marine)	6.5-8.5
Phenols (mg/l)	0.001
Selenium (mg/l)	0.01
Selenium and its compounds (mg/l)	0.1
Hexavalent Chromium VI compounds (mg/l)	0.5
Sulphide (mg/l)	0.1
Simazine (mg/l)	0.03
Total Suspended Solids, (mg/l)	30
Tetrachloroethylene (mg/l)	0.1
Thiobencarb (mg/l)	0.1
Temperature (in degrees celious) based on ambient temperature	3
Thiram (mg/l)	0.06
Total coliforms (counts /100 ml)	30
Total Cyanogen (mg/l)	Nd
Total Nickel (mg/l)	0.3
Total Dissolved solids (mg/l)	1200
Colour in Hazen Units (H.U)	15
Detergents (mg/l)	Nil
Total mercury (mg/l)	0.005
Trichloroethylene (mg/l)	0.3
Zinc (mg/l)	0.5
Whole effluent toxicity	
Total Phosphorus (mg/l)	2 guideline value
Total Nitrogen	2 guideline value

Remarks

Standard values are daily/monthly average discharge values. Not detectable (nd) means that the pollution status is below the detectable level by the measurement methods established by the Authority. Table 33 shows the effluent discharge standards into public sewers in Kenya.

Table 33: Standards for Effluent Discharge into Public Sewers in Kenya

Parameter	**Maximum levels permissible**
Suspended solids (mg/L)	250
Total dissolved solids (mg/L)	2000
Temperature ^{0}C	20 - 35
pH	6-9
Oil and Grease (mg/L) -where conventional treatment shall be used	10
Oil and Grease (mg/L)- where ponds is	5
a final treatment method	
Ammonia Nitrogen (mg/L)	20

Substances with an obnoxious smell	Shall not be discharged into the sewers
Biological Oxygen Demand BOD_5 days at 20 ^oC (mg/L)	500
Chemical Oxygen Demand COD (mg/L)	1000
Arsenic (mg/L)	0.02
Mercury (mg/L)	0.05
Lead (mg/L)	1.0
Cadmium (mg/L)	0.5
Chromium VI (mg/L)	0.05
Chromium (Total) (mg/L)	2.0
Copper (mg/L)	1.0
Zinc (mg/L)	5.0
Selenium (mg/L)	0.2
Nickel (mg/L)	3.0
Nitrates (mg/L)	20
Phosphates (mg/L)	30
Cyanide Total (mg/L)	2
Sulphide (mg/L)	2
Phenols (mg/L)	10
Detergents (mg/L)	15
Colour	Less than 40 Hazen units
Alkyl Mercury	Not Detectable (nd)
Free and saline Ammonia as N (mg/L)	4.0
Calcium Carbide	Nil
Chloroform	Nil
Inflammable solvents	Nil
Radioactive residues	Nil
Degreasing solvents of mono-di-trichloroethylene type and any other parameter as the Authority and the sewerage service provider may prescribe.	Nil

4.1.3.3 Fossil Fuel Emission Control Standards in Kenya

The Government of Kenya established the standards for fossil fuel emission in 2006. ‘air pollution’ in Kenya means the introduction by man, directly or indirectly, of substances in the air which results in harmful effects of such nature as to endanger human health, harm living resources and eco-systems, cause material damage, interfere with amenities and other legitimate uses of the environment; ‘fossil fuels’ means petrol, diesel fuel oils and kerosene. ‘fossil fuels emissions’ means emissions causing air pollution from the use of any fossil fuel where the constituent properties are not properly combusted in an internal combustion engine and are emitted out as toxic carbon gases and particulates matter. In Kenya, any internal combustion engine is subject to inspection under environmental regulations and shall, as a condition of compliance with the inspection, pass such tests as may be required to demonstrate that the internal combustion engine complies with any standards requirements for the control of air pollution or contamination as may be prescribed.

The emission standards to be complied with by any internal combustion engine shall be those set out in the Kenyan Environmental regulations. Any person who operates or owns an internal combustion engine and permits it to be operated upon any road street public highway or any premises which emits smoke Or other air contaminants in excess or emission standards set out in the first schedule commits an offence and shall be liable, upon conviction, to the penalty prescribed. Vehicle emission standards both for petrol and diesel powered vehicles are shown in Table 34.

Table 34: Petrol Powered Motor Vehicle Emission Standards in Kenya

Vehicle Class and Model Year	**Maximum Emission Concentration HP(ppm)**	**CO (percentage)**
Class I;		
Gross vehicle weight of 6000 pound or less		
1975 – 1977	500	5.0
1978 – 1979	400	3.0
1980	300	3.0
1981+	220	1,2
CLASS II:		
Gross vehicle weight of 6001 pounds to 10,000 pounds		
1975 – 1977	750	6.5
1978 -1979	600	5.5
1980	400	4.5
1981 – 1984	300	3.0
1985+	200	1.2

Diesel Powered Motor Vehicle Emission Standards

Standard and Procedures for Inspection of Diesel Fuelled Vehicles – Pass/Fail Criteria

1. Dynamometer Conditions
   a) A diesel-powered vehicle with a net weight greater than or equals to 6001 pounds and less than or equal to 10,000 pounds shall be tested on a loaded dynamometer by applying a single load of 30Hp (+-2Hp) while being operated at a drive wheel speed of 50mph (+-2mph).
   b) A diesel-powered vehicle with a net weight of 6000 pounds or less shall be tested on a loaded dynamometer by applying a single load of 9Hp (+-2Hp) while being operated at a drive wheel speed of 30mph (+-2mph).

2. Opacity Standard

No diesel-powered vehicle shall emit visible emissions in excess of 20% opacity for 5 consecutive seconds or more when under the applicable loading.

   a) All diesel- powered motor vehicles shall be inspected with an opacity meter that meets the requirements of the Authority.
   b) Separate measurements shall be made on each exhaust outlet on diesel – powered motor vehicles equipped with multiple exhaust outlets. For vehicles equipped with more than one exhaust pipe, the reading taken from the outlet giving the highest opacity reading shall be used for comparison with the standard. Exhaust tail pipes on diesel-powered motor vehicles shall allow for safe attachment of the opacity meter sensor unit. Dual or multiple exhaust vehicles will be tested by sampling all exhaust tail pipes simultaneously or individually.
   c) Any diesel-powered motor vehicles not meeting the opacity standard shall fail the inspection.

3. Idle Mode Test

When it is necessary to omit the loaded mode test, as specified below, an opacity measurement shall be made while the vehicle is operating at idle under no load.

a) If the opacity measured during the idle mode test is greater than 5%, the vehicle shall fail the inspection.
b) The loaded mode test shall be omitted on any motor vehicle if-
   i. The motor vehicle is in any condition that precludes loaded mode testing for reasons of health or safety, or both, or personal, facility, equipment or vehicle.
   ii. The motor vehicle is unable to be tested because of the vehicle's inability to attain the speeds specified on the dynamometer.
   iii. The motor vehicle is equipped with a constant four-wheel drive.
c) Re-inspection stations shall not be allowed to perform the idle mode test for diesel-fuelled vehicles.

4. Inspection Rejection

The emissions inspector may refuse to perform the opacity test required by these Regulations for any motor vehicle if the motor vehicle has an obvious exhaust system leak or other condition that could affect the validity of the opacity reading, as determined by the emissions inspector. Application for license for fuel catalyst to supplement the specified fossil fuels

4.1.3.4 Noise and Excessive Vibration Pollution Control Standards in Kenya

In 2009 the Government of Kenya established the standards on noise and excessive vibration pollution control standards. In Kenya, "noise" means any undesirable sound that is intrinsically objectionable or that may cause adverse effects on human health or the environment and "Noise pollution" means the emission of uncontrolled noise that is likely to cause danger to human health or damage to the environment. It is also defined "Sound" means an oscillation in pressure, particle displacement, particle velocity or other physical parameter in a medium with internal forces that causes compression and rarefaction of that medium and "Sound source" means any person or thing from which sound is emitted. "Vibration" means an oscillatory motion of solid bodies of deterministic or random nature described by displacement, velocity or acceleration with respect to a given reference point.

Excessive vibration' means the presence of vibration which;

- Is of such intensity, duration, frequency or character as to annoy, disturb, or cause or tend to cause adverse psychological or physiological effects on persons, or to damages or tend to damage personal or real property; and,
- Exceeds 0.5 centimeters per second beyond any source property boundary or 30 metres from any moving source.

"dB(A)" means decibels of noise, measured with an A-weighted filter; "decibel" means a dimensionless unit used in comparison of the magnitude of sound pressure or power.

In determining whether noise is loud, unreasonable, unnecessary or unusual, the following factors may be considered;

- time of the day;
- proximity to residential area;
- whether the noise is recurrent, intermittent or constant;
- the level and intensity of the noise;
- whether the noise has been enhanced in level or range by any type of electronic or mechanical means; and,

- Whether the noise can be controlled without much effort or expense to the person making the noise.

Scope

In Kenya, the emission standards of noise will not be applicable for the purpose of alerting persons to the existence of an emergency; such cases can be in the following categories;

- The emission of noise in the performance of emergency response; The emission of noise in connection with the protection of the health and safety of residents or their property during emergency conditions;
- warning devices necessary for the protection of public safety, such as police, fire and ambulance sirens, and train horns; or

Provisions Relating to Noise from Certain Sources

- Radio, TV, other sound amplifying devices
- Parties and social events
- Hawkers, peddlers, touts, street preachers
- Machinery
- Noise from motor vehicles
- Construction at night
- Noise, excessive vibrations from construction, demolition, mining or quarrying sites.

Noise standards values for different categories in Kenya are shown in Tables 35 to 37.

Table 35: Maximum Permissible Noise Levels in Kenya

Zone		Sound Level Limits dB(A) (Leq,14 h)		Noise Rating Level (NR) (Leq,14 h)	
		Day	Night	Day	Night
A	Silent Zone	40	35	30	25
B	Places of worship	40	35	30	25
C	Residential : Indoor Outdoor	45 50	35 35	35 40	25 25
D	Mixed residential (with some commercial and places of entertainment)	55	35	50	25
E	Commercial	60	35	55	25

Time Frame

Day: 6.01a.m. – 8.00p.m. (Leq, 14h)

Night: 8.01p.m. – 6.00a.m. (Leq, 10h)

Table 36: Maximum Permissible Noise Levels for Construction Sites in (Measurement taken within the facility) in Kenya

	Facility	Maximum Noise Level Permitted (Leq) in dB(A)	
		Day	Night
(i)	Health facilities, educational institutions, homes for disabled etc.	60	35
(ii)	Residential	60	35
(iii)	Areas other than those prescribed in (i) and (ii)	75	65

Time Frame:
Day: 6.01 a.m. – 6.00 p.m. (Leq, 14h)
Night: 6.01 p.m. – 6.00 a.m. (Leq, 14h)

Table 37: Maximum Permissible Noise Levels for Mines and Quarries (Measurement taken within the facility) in Kenya

Facility		Limit Value in dB (C) Max
1	For any building used as a health facilities, educational institutions, convalescent home, old age home or residential building	109 dB (C)
2	For any building in an areas used for residential and one or more of the following purposes: commerce, small-scale production, entertainment, or any residential apartment in an area that is used for purposes of industry, commerce or small-scale production, or any building used for the purpose of industry, commerce or small-scale production.	114 dB (C)

4.2 EIA Guidelines

4.2.1 General Review of EIA Guidelines for EAC

Our review of the documents and best practices elsewhere has identified six (6) steps to be followed while carrying out the EIA for the road projects. The identified steps are as follows;

- The Environmental Assessment Process
- Project Planning and Pre-feasibility Phases
- Feasibility Study and Preliminary Design Phases
- Construction Phase – Supervision and Monitoring
- Traffic Operations and Road Maintenance and
- Decommissioning

A summary of the available EIA guidelines across EAC member states is as follows;
With exception of Burundi and Zanzibar, other EAC member states, namely Tanzania, Uganda, Kenya and Rwanda have EIA guidelines. While Tanzania and Uganda have EIA guidelines specific to the road sector, Kenya and Rwanda have EIA guidelines for any project. Though Tanzania and Uganda have EIA guidelines for road sector, the EIA guidelines however differ in terms of names. The EIA guideline for Tanzania is termed Road Sector Environmental Assessment and Management Guidelines, while the one in Uganda has been named Environmental Impact Assessment Guidelines for Road Projects. Rwanda uses different names interchangeably like EIA guidelines, EIA procedures and EIA Processes.

The detailed description of EIA guidelines for each country in EAC is given below. It has however be noted and taken into account that the detailed description doesn't take include Burundi and Zanzibar as they don't have any EIA guideline.

4.2.2 Tanzania

In Tanzania the EIA guidelines for road sector include the Policy and Legal Framework. The Government of Tanzania's commitment to environmental management and sustainable development is reflected in its three main environmental policy documents: the National Environment Action Plan (NEAP 1994), the National Conservation Strategy for Sustainable Development (NCSSD 1994), and the National Environment Policy (NEP 1997). Furthermore, there are other relevant policy developments in the sector ministries

Tanzania has enacted the Environmental Management Act, G.N. No. 20 of 2004 (EMA) to regulate environmental management issues and EIA requirements in the country. The legislation requires sector ministries to establish a sector environmental section and appoint sector environmental coordinators. It also, among others, specifies institutional responsibilities and obligation to oversee preparation and implementation of EIA process.
The EIA guidelines in Tanzania further contains the Institutional Frameworks. The institutional framework in Tanzania are Road Sector Authorities which is Department of Safety and Environment (DSE) in Ministry of Infrastructure Development (MOID) which is responsible for road sector environmental policies and strategies, coordination, supervision, guidance, monitoring, follow-up and reporting to the environmental authorities; and Road authorities which are responsible for planning and executing road projects and maintenance of roads.

On the other hand the Environmental Authorities in Tanzania include

- The Minister responsible for the environment;
- The Office of the Director of Environment (DOE);
- The National Environment Management Council (NEMC);
- The Technical Advisory Committee (TAC)
- Sector ministries;
- Regional administrative secretariats (RASs); and
- Local government authorities (LGAs), they are: city, municipal, district, township, ward, village, mtaa and kitongoji.

The EIA guidelines in Tanzania have been developed following its life cycle approach. The guidelines are therefore on the following procedures and orders;

The Environmental Assessment Process which includes

- Objectives and Functions
- Steps in the Environmental Assessment Process
- The Roles and Responsibilities of the Road Authority

The other steps is during the Project Planning and Pre-feasibility Phases which entails

- Environmental Registration and Project Brief
- Environmental Screening
- Scoping of the EIA Study
- Terms of Reference for the Environmental Expert
- Preliminary Environmental Impact Assessment

In Feasibility Study and Preliminary Design Phases, the activities to be included are;

- The EIA Study
- Environmental Management Plan (EMP)
- Compensation and Resettlement Plan (CRP)
- Road Safety Audit (RSA)
- Submission of Environmental Impact Statement
- Review of the EIS
- EIA Certificate

Tendering, Contracting and Detailed Design Phases include the items on

- Inclusion of Environmental Mitigation Measures into Detailed Design
- Bill of Quantities (BoQ)
- Contract Tendering and Reviewing Bids
- Environmental Training of Contractors and Workers

In Construction Phase – Supervision and Monitoring, the items are;

- Environmental Follow-up Activities
- Pre-construction Activities
- Environmental Supervision
- Environmental Compliance Monitoring
- Meetings and Communication
- Final Inspection and Handing Over of Site
- Self-Auditing
- Control Auditing

Traffic Operations and Road Maintenance guideline includes

- Environmental Monitoring and Follow-up
- The Road Authority's Environmental Auditing
- Control Auditing
- Environmental Management in Road Maintenance
- Environmental Management of Vehicles and Traffic Operations

4.2.3 Uganda

In Uganda the EIA guidelines contain Policies, Laws, and Regulations. The overarching policy document for the EIA practice in Uganda is the *National Environment Management Policy 1994* whose overall goal is: sustainable social and economic development, which maintains and enhances environmental quality and resource productivity to meet the needs of present generations without compromising the ability of the future generations to meet their own needs. In addition, there are other sectoral and cross-sectoral policies, which may have relevance to specific EIA activities. The transport infrastructure policy is an example of a policy specific to the transport sector, including roads. It supports the assessment of the national frameworks for environmental policies and the preparation of environmental management plans in road transport programmes.

In addition to the law, the environmental impact assessment (EIA) process in Uganda is governed by the following key reference documents, which apply to all sectors and collectively make up the overarching environmental impact assessment framework for Uganda.

For Stakeholders in the EIA Process for Road Projects

In Uganda, NEMA is the principal institution responsible for the management of the environment with the express mandate to co-ordinate, monitor and supervise all activities in the field of environmental management. With respect to the EIA process, NEMA is the overall authority. However, given that NEMA is not an implementing institution, it performs some of its duties through co-operation with and delegation to other institutions or lead agencies.

Because of the multi-sectoral nature of the impacts of road projects, a number of ministries, most notably the Ministry of Works, Housing and Communications (MOWT), departments and local governments responsible for the sectors are involved at various stages of a road project cycle. The public, the road users, civil society institutions and those who benefit from the road, are also stakeholders who should be consulted during the planning and implementation of road projects.

The EIA Process thus for Roads in Uganda is as follow;
The EIA Process for Roads include

- Environmental Implications of Road Projects
- The EIA Process and the Road Project Cycle
- The Project Brief
- Screening
- Environmental Impact Review (EIR)
- Environmental Impact Assessment (EIA)
- Review of EIR Report and EIS

Guidelines for Socioeconomic and Cultural Impacts Assessments include

- Introduction
- Socioeconomic impact assessment
- Cultural Heritage

Guidelines for Compensation and Resettlement

- Compensation
- Resettlements

Guidelines for Other Technical Considerations

- Environmental standards
- Cumulative effects
- Economic analysis

Guidelines for Public Consultation and Public Disclosure

- Information dissemination in road sector projects
- Responsibility for ensuring public involvement
- Methodologies for public involvement

4.2.4 Kenya

In Kenya the EIA guidelines are under the Policy and Legal frameworks for The National Environment Management Authority (NEMA) as per EMCA (1999) and the Environmental Impact Assessment and Audit Regulations (2003) administer EIA in Kenya. Experts registered by NEMA undertake EIA in Kenya on behalf of the project proponents. Experts are either individuals or firms, and after undertaking the EIA, submit the reports to NEMA. Lead agencies have a key role in facilitating decision making on EIA reports by NEMA.

EIA Process in Kenya

EIA is a planning and management tool for proposed projects which is used to predict the environmental consequences or impacts of any development project with a view of recommending mitigation measures. EIA ensures that the potential adverse environmental impacts are foreseen and addressed at an early stage in the project planning and design. The possible environmental consequences of projects include ecological, economic, cultural, aesthetic, health and safety, social, and amenity impacts.

Guiding Principles of EIA in Kenya

- Do EIA before decisions are taken.
- Conduct an independent review.
- Include post-project analysis.
- Involve the public.
- Include alternatives.
- Consider both biophysical and socio-economic impacts.
- Include consideration of trans-boundary issues.

In carrying out the EIA for any project in Kenya, the stages of EIA Process are;

- Screening
- Scoping
- Consultation and Public Participation
- Baseline Information:
- Impact Prediction and Evaluation:
- Impacts Mitigation:
- Analysis of alternatives
- Reporting
- Implementation, Monitoring and Evaluation

4.2.5 Rwanda

In Rwanda the EIA is guided by the National Policy on EIA. The Constitution of the Republic of Rwanda, adopted in June 2003, ensures the protection and sustainable management of environment and encourages rational use of natural resources. Organic Law (No. 04/2005 of 08/04/2005) and various socio-economic development policies and strategies such as “Rwanda Investment And Exports Strategic Action Plan, 2005-2007” and “Vision 2020” call for a well regulated environment management system that takes into account principles of sustainable development while at the same time contributing to poverty reduction. The Organic Law (Article 67) requires that projects, programmes and policies that may affect the environment shall be subjected to environmental impact assessment before obtaining authorization for implementation. Article 69 gives REMA legal authority to oversee the conduct of EIA.

Roles and Responsibilities of Different Stakeholders in EIA

Many relevant parties take part in EIA process in Rwanda as indicated below.

REMA - Mandated by law, REMA has a responsibility to organize the EIA procedure by undertaking screening, guiding developers on assessment procedures, conducting public hearings, reviewing EIA reports based on the terms of reference (ToR) and taking decisions on approval or disapproval of proposed projects. The Authority is also responsible for monitoring implementation of environmental protection measures recommended by EIA studies.

Developers - The developer has direct responsibility for the project and should provide necessary information about the project at all stages of the EIA process. Developers hire experts to undertake EIA studies on their behalf and answer questions about potential impacts and proposed mitigation

recommendations at public hearings. Developers have the responsibility to implement the environmental management plan including mitigation measures as proposed in the EIA report and carry out subsequent environmental monitoring and auditing.

EIA Experts **-** EIA experts are professionals registered with REMA to undertake impact studies. They help the developer to carry out EIA, design mitigation measures, prepare EIA report, and design environmental management and monitoring plans.

Lead Agencies **-** Lead agencies such as government ministries or departments have the responsibility for management and protection of environmental resources, public health and socio-economic development. Lead agencies have the responsibility to take part in EIA of projects under their sectors. They provide valuable technical information to EIA experts during EIA studies and are involved in the review process.

The Public - Communities have a right to take part in the EIA process. Public participation allows important social and environmental problems to be identified and gain consensus on nature and adequacy of proposed mitigation measures and recommendations. The role of the public in the EIA process includes contributing information and advice to EIA studies during scoping and public hearing process. The public also advises project developers and REMA on approaches to avoid, minimize or compensate for adverse environmental impacts.

International Funding Organizations - All international funding organizations require EIA for projects they are to fund.

Academic Institutions - Members of academic institutions are commonly co-opted on EIA Technical Committees. They also institutionalize environmental education in their curricula.

The EIA process followed in Rwanda is described below;

EIA Process

- Project Application and Registration by REMA
- Screening
- Scoping and Terms of Reference
- Environmental Impact Study and Report
- Submission of EIA Report to the Authority
- EIA Report Review, and Decision-Making
- Project Decommissioning or Relocation

The EIA guidelines in Rwanda have part on the Roles of Stakeholders' in the EIA Process which is;

- Roles of Developers
- Roles of The Authority And Lead Agencies

Procedure for Conducting Public Hearings

- Introduction
- Public Involvement
- Public Hearing Process
- Transcripts and Summary of Proceedings
- Public Hearing Report
- EIR Decision Making and Pursuant Requirements
- Administrative Issues

4.3 Strategic Environmental Assessment (SEA)

Apart from EIA the said countries of Tanzania, Uganda, Kenya and Rwanda all have Strategic Environmental Assessment (SEA). The concept of sustainable development requires EIA to be expanded beyond projects level. SEA is the assessment of impacts of policies, plans, programmes which are higher than the project level. It involves impacts identification and analysis of development programs or policies in order to establish potential cumulative effects on environment over the long-term.

For effective integration of decision making with sustainable development criteria, SEA has proven an effective tool in restraining environmental degradation at national and global levels. SEA and project level EIA have a close tiering relationship, similar to tiering from policy to project (the policy poses the general objectives for the planning, plans are the general framework for the formulation of programs and the programmes orient the preparation of concrete development projects). According to this tiering approach, the type and detail of environmental information necessary depends on the relevant needs of decision makers. For example, in policies and development plans, one needs general and qualitative environmental information to identify major environmental problems, without dealing with specific impacts. Then, when implementing project level EIA it is necessary to identify specific impacts and technical information of the project. Since it is important that EIA must be carried out not only at project level, but also for master plans for development of regions, sectors, provinces, cities and industrial zones, SEA is a vital tool in such cases.

4.4 Transboundary Environmental Assessment Guidelines for Shared Ecosystems in East Africa

These guidelines provide procedures for conducting trans-boundary environment assessment in shared ecosystems in East Africa and the roles for the key stakeholders and players during the implementation of the Trans-boundary Environment Assessment process in the member states. The trans-boundary environment assessment will therefore help to define whether a proposed policy, project or activity will have significant positive or adverse trans-boundary impacts, determine whether the adverse impacts can be avoided or mitigated and recommend such measures as to prevent or reduce adverse impacts and or propose alternatives to the proposed policy, project or activity.

4.4.1 Activities to be considered for Trans-boundary Environment Impact Assessments

Activities to be subjected to the Guidelines for Trans-boundary Environment Assessment include those that are implemented in the geographical area of the trans-boundary ecosystem. These shall include; policies, plans, programs or projects in one Member State or activities out of character with their surroundings involving major changes in land use and which are likely to cause trans-boundary impacts in neighbouring countries. Such policies, plans, programs or activities could involve transportation and communication, mining, exploration for petroleum, hydropower stations, tourism, large scale agricultural projects, irrigation and diversion of water courses as well as large weed and pest control programs

4.4.1.1 The Core Areas constituted under these Guidelines are aquatic and terrestrial ecosystems.

The terrestrial ecosystems comprise the areas demarcated as-
(i) The Minziro-Sango Bay Swamp forests,
(ii) The Eastern Arc Mountains (Pare and Taita Mts);
(iii) Mount Elgon and Loima-Moroto hills and;

(iv) The Serengeti-Mara, Kilimanjaro-Longido-Kajiado, and Tsavo West-Mkomazi/Umba ecosystems.

The Aquatic ecosystems comprise of the areas demarcated in-
(i) The fresh water bodies of Lakes Victoria, Jipe, and Chala;
(ii) The Minziro-Sango Bay Swamp and;
(iii) The marine coastal strip of the western Indian Ocean of Kenya and Tanzania.

4.4.1.2 The Immediate Impact Area

The Immediate Impact Area is defined to comprise catchment areas outside of the core area where human or natural activities are likely to impact directly or be impacted on by the Core Area. The watershed of the drainage basins of Lakes Victoria, Natron, Jipe and the Pangani River in Tanzania defines the outer limit of such areas in hydrological terms.

Since surface runoff and eroded material from these catchments subsequently find their way into Lakes Victoria, Lake Natron and the Indian Ocean, the life of the lakes and coastal areas of the Indian Ocean is very much dependent on the hydrological regime and activities taking place in these catchments.

4.4.1.3 The Area of Influence

The Areas of Influence is defined to include all areas likely to have indirect relationships and impacts with the core area. Examples include industries in distant towns and cities; policy decisions taken in far away, in administrative centres; trading activities between coastal and inland centres and upstream and downstream environmental impacts.

4.4.2 Stages in Trans-Boundary EIA Process

- Stage 1: Preparation of Project Brief
- Stage 2: Screening and Scoping
- Stage 3: Trans-boundary Environmental Assessment Study (TEAS)
- Stage 4: Review of the Environmental Assessment Statement
- Stage 5: The Public Hearing
- Stage 6: Decision Making
- Stage 7: Monitoring, Auditing and Enforcement

Recommendation

For regulation of environment resulting from road project, the recommended minimum standards are in relation to air quality (including vehicle emission standards), water quality standards, soil quality standards, discharge of effluent standards, noise standards, vibration standards and electromagnetic waves. For EIA Guidelines, the environmental assessment should be in accordance with the phases of road project namely; Project planning and pre-feasibility phases, feasibility and preliminary design phases of a road project, contracting tendering and detailed design phase, construction phase, operation of the road, and decommissioning. Moreover there should be the guidelines for Socioeconomic and Cultural Impacts Assessments and Compensation and Resettlement Guidelines

5. CONVERGENCES AND DIVERGENCES OF ENVIRONMENTAL STANDARDS AND REGULATIONS

5.1 Environmental Standards

As it has been indicated in the chapter four of this report that for the environmental regulations, the minimum environmental quality standards applicable to roads works are in relation to:

- Water quality;
- Discharge of effluent;
- Air quality (including vehicle emission standards)
- Control of noise pollution;
- Vibration;
- Soil quality;
- Control of noxious smells;
- Light pollution;
- Electromagnetic waves and microwaves;
- Hazardous substances and materials; and
- Any other environmental quality standards

The study attempted to establish the areas of convergence and divergence for the environmental standards in EAC member states. The following section analyzes each environmental standard and the areas where there is convergence and divergence for the same across the community.

5.1.1 Water Quality Standards

With exception of Uganda, Burundi and Tanzania Island (Zanzibar), other countries in EAC namely Tanzania, Kenya and Rwanda have water quality standards. While in Tanzania, the water quality standards are for drinking water and include f microbiology, physical and chemical parameters, in Kenya water quality parameters are for six (6) categories namely Quality Standards for Sources of Domestic Water, Standards for Effluent Discharge into the environment, Standards for effluent Discharge into Public Sewers, Microbiological Quality Guidelines for Wastewater used in Irrigation, Standards for Irrigation Water, Quality Standards for Recreational waters. The details of standards from Rwanda were not immediately available by the time when this paper was being prepared. The standards for water quality therefore diverge in terms of definition, uses type pollutants and numerical values. The numerical values for water quality standards have been detailed in Chapter four of the main report. The convergence is that these countries are having water quality standards.

5.1.2 Discharge of Effluent Standards

Only Tanzania, Uganda, Kenya and Rwanda have the standards for discharge of effluents into the environment. While the effluents for discharge in Uganda are discharge into land or water, in Tanzania and Kenya the standards apply to water bodies only. Moreover, Uganda and Tanzania it has been defined what it means by wastewater pollution while there is no such definition in Uganda. The divergence here is on definition and its application whether on only water bodies or both on water bodies and on land and on the type of pollutants. The definitions of this terminology and their numerical values for discharge effluent have been given in chapter four.

5.1.3 Air Quality Standards

It is only Tanzania and Rwanda that have air quality standards. Other countries in EAC, namely Uganda, Kenya, Burundi and Zanzibar either don't have standards at all or they have standards in draft form. The country with draft form is Kenya while other countries don't have any. In Tanzania, the air quality standards are both for ambient air quality standards and stationary sources. In this category, there are also vehicles exhaust emissions standards. The areas that the study has identified to be divergent are on definition of the terminology, numerical values, type of pollutants and different categories of vehicle emission. Kenya on the other hand has the standards for fossil fuel emissions. It has the standards for petrol powered vehicle emission and diesel powered emission. The detailed descriptions of the air quality standards which also include vehicle emission standards have been given in chapter four.

5.1.4 Control of Noise Standards

Four countries in EAC, namely Tanzania, Uganda, Kenya and Rwanda have established the standards for noise and vibration pollution. Only one country, which is Kenya that has indicated to have the standards for both noise and excessive vibration, however the standards in the document is only for noise and nothing for excessive vibration though it has been mentioned in the standards. No country in EAC that has developed standards solely for vibration pollution though Tanzania has the draft form of the vibration standards. However, these countries have standards for noise. The area of divergence is on the definition of the noise pollution and also on the areas affected by the noise. While in Tanzania, the numerical values are for different land use categories; in Kenya it is named zones while Uganda there is no mention. The other area for divergence is on the numerical values for zones, land use categories. The other area is on the definition of the time frame for day and night for the maximum noise level permitted. The detailed descriptions of the noise and vibration pollution standards for different categories in different EAC member states have been given in chapter four.

5.1.5 Sub-Sonic vibration Standards

Our preliminary review has found out that there is no any country in the EAC that has established the standards for sub-sonic vibration. In the development of the environmental standards manual and guidelines, the study will t adapt from best practices elsewhere but also using the ISO and WHO guidelines.

5.1.6 Soil Quality Standards

Three countries of EAC, namely Tanzania, Uganda and Rwanda have soil quality standards. The rest of the member states of Kenya, Burundi and Zanzibar don't have any standards for soil quality. While in Tanzania, the soil quality standards are for soil contaminants in agriculture and habitat. The standards limit the contaminants to the soil. In Uganda the standards are for management of soil quality mainly for the agricultural practice. The observation is that in Uganda, standards are not purely standards for soil quality but are soil properties. The soil parameters considered are for; Parameters for rain-fed agriculture, Parameters for irrigated agriculture, Parameters for wetland rice systems under natural flooding, parameters for wetland rice under irrigated systems and soils to be used only with conservation measures. The divergence here is that the way soil quality has been defined in Tanzania is different from Uganda. Moreover the types of pollutants and numerical values to be considered in two countries are different. The detailed descriptions of soil quality standards for different countries have been given in chapter four.

5.1.7 Control of Noxious Smells Standards

The study has found out that there is no any country in the EAC that has established the standards for noxious smell. In the development of the environmental standards manual and guidelines, the study has adapted from best practices elsewhere but also using the ISO and WHO guidelines.

5.1.8 Light Pollution Standards

There is only one country in EAC community that has got the standards for light pollution. The study was however not able to immediately get the standards for light pollution when this working paper was being drafted and prepared and therefore could establish the areas for improvement.

5.1.9 Electromagnetic Waves and Microwaves

Our review has found out that it is only Tanzania that has established the standards for electromagnetic waves and microwaves. In the development of the environmental standards manual and guidelines, the study has adapted from Tanzanian standard and from best practices elsewhere but also using the ISO and WHO guidelines.

5.1.10 Hazardous Substances and Materials

The study has established that there is no any country in EAC that has explicitly established the standards for hazardous substance though there is only one country that has established the standards for ionizing radiation substance. The country is Tanzania. Therefore in the development of the environmental standards manual and guidelines, the study adapted from Tanzania, best practices elsewhere and also using the ISO and WHO guidelines.

5.2 EIA Guidelines

Our review has found out that EIA guidelines for Tanzania, Kenya and Uganda are more elaborate and focused since they focus only on EIA guidelines for Road Sector. The convergent point is that the EIA guidelines for Tanzania, Uganda, Kenya and Rwanda include policy and legal frameworks and institutional framework of the respective countries. Two countries in EAC namely, Rwanda and Uganda term Stakeholders as the same as institutional set up for Tanzania and Kenya. This needs to be harmonised.

The divergent point observed is that the EIA processes for different countries are different. While the EIA process in Tanzania, Kenya and Uganda are in accordance with different phases of the road projects, the EIA process in Rwanda and Kenya are general and lumped. Moreover the EIA processes for Uganda also include the guideline for Socioeconomic and Cultural Impacts Assessments, Compensation and Resettlement Compensation and Resettlements. Like it has been indicated the EIA process for Rwanda are not as elaborate as the ones for Tanzania, Kenya and Uganda. Details for transboundary Environmental assessment guidelines for shared ecosystems in East Africa are covered in Section 4.4.

Recommendation

To have a common understanding of the environmental standards so as to create the state of harmony in these standards, it has been recommended to have common definitions and numerical values for different environmental standards and their parameters. This has been incorporated in the manual and guidelines prepared which are in Appendix B3.

6. HARMONISATION AND IMPROVEMENT FOR ENVIRONMENTAL REGULATIONS AND STANDARDS AND EIA GUIDELINES

This Chapter presents the harmonisation of the areas which have been identified and proposed by this study.

6.1 Environmental Standards

Scenarios that were looked at in harmonising environmental standards for road sectors in EAC are as follows;

(i) Those that have already been harmonised by EAC
(ii) Those that this study has harmonised
(iii) The ones that have been developed

6.1.1 Standards that have already been harmonised by EAC in its Catalogue of East African Standards

The study has found out that, EAC has harmonized some of the environmental standards in its Catalogue of East African Standards of 2010. The following environmental standards have been harmonised and they have not been considered for harmonisation. They will have to be referred to, anytime when they are to be applied to the road sector. The standards are;

- EAC 13.040 Air quality
- EAC 13.040.01 Air quality in general
- EAC 13.040.20 Ambient atmosphere
- EAC 13.040.40 Stationary source emissions
- EAC 13.040.50 Transport exhaust emission
- EAC 13.040.90 Other Standards related to air quality
- EAC 13.060.01 Water Quality in general

The study has adapted these standards.

6.1.2 Harmonised Standards from this Study

The study has harmonised three environmental standards. The standards are, noise standards, soil quality standards and effluents and receiving waters. It appears that there some slight difference in terms of definition/terminology of the standards across different EAC countries. There was therefore the need to harmonise the definition/terminology for different standards. Another general aspect is that there was the need to harmonise the scope of standards for different countries within EAC. The detailed descriptions of these standards are in the next sections of this report.

6.1.2.1 Noise Standards

The harmonisation for noise standards has looked into classification of land use categories, standards noise values for different types of land use categories (LAeq or not), Noise standards for areas facing roads and Noise emission standards for construction equipment and small and large vehicles. For classification of land use categories, harmonisation was on class of land use, category of land use and its description. For Standard noise values for different types of land use categories (LAeq or not), harmonisation looked into area and standards value (dBA) both for day and night times. For noise standards for areas facing roads, the harmonisation is being sought in the class of area and also standards value (dBA) both for day and night times. For noise emission standards for

construction equipment and small and large vehicles the harmonisation is on the type of equipment/vehicle and the noise limit (dBA).

Harmonized Noise Standards

Classification of land use categories are presented in Table 38.

Table 38: Classification of Land Use Categories

Class	Land use category	Description
Type 1	Institutional areas	Areas where quietness required and where welfare institutions are concentrated (Hospitals, Public courts, etc)
Type 2	Residential/ Institutional	Areas with both residential and institutional buildings and areas with open and low density buildings as well as apartment houses (e.g. schools, offices, etc)
Type 3	Recreational areas	Areas with recreational centres and houses, recreational areas for public use and nature reserve areas
Type 4	Residential/ Commercial	Areas allocated for both residential and commercial activities such as shopping / market areas, etc
Type 5	Trade/Commercial/ Residential	Includes light industry, stores, repair shops, etc Unplanned areas without strong connection between trade and owners of dwellings City centre areas with high concentration of shops (Central Business District)
Type 6	Industrial areas	Areas allocated exclusively for industrial activities for which it is difficult or very costly to reduce noise
Type 7	Open country/ Undeveloped lands	Agricultural areas/rangelands

Standard noise values for different types of land use categories

The standard noise values for different types of land use categories is summarised in Tables 39 to 41.

Table 39: Standard noise values for different types of land use categories

Area	Standard Value (dBA)	
	Day Time	Night Time
Type 1	50 or less	40 0r less
Type 2	50 or less	45 or less
Type 3	55 or less	45 or less
Type 4	60 or less	50 or less
Type 5	65 or less	55 or less
Type 6	70 or less	70 or less

Table 40: Noise standards for areas facing roads

Area class	Standard value (dB A)	
	Day Time	Night Time
Area Type 1 facing roads with two or more lanes	50 or less	45 or less
Area Type 2 facing roads with two or more lanes and Areas Type 3 facing a road with one or more lanes	55 or less	45 or less

Note: Lane = refers to a longitudinal strip of road with uniform width to enable a single line of cars to travel safely and without hindrance

Table 41: Noise emission standards for construction equipment and small and large vehicles

Equipment/Vehicle	sNoise limit (dB A)
Small motorbike or scooter	80
Passenger car	82
Small bus or commercial vehicle	85
Medium bus or commercial vehicle	89
Large bus or commercial vehicle	91
Compactors (rollers), front loaders, concrete mixers, cranes (movable)	75
Dozers, graders, trucks, jack hammers	75

For noise measurements reporting the following information based on ISO 1996 shall be mandatory:

- The purpose of the measurement
- The standard used
- Equipment used, including serial numbers
- Map showing position of sound

6.1.2.2 Soil Quality Standards

For soil quality standards the harmonisation is looking into the following areas; Contaminant limits for volatile organic compounds, contaminant limits for heavy metals Contaminant limits for pesticides and Contaminants limits for other chemicals. In all these areas the harmonisation was mainly on the parameters, their upper limits in mg/kg and their test methods. Based on the practices in East Africa and elsewhere the study has proposed the following soil quality standards to be applicable in EAC as presented in Tables 42 to 45.

Table 42: Harmonised Contaminant Limits for Volatile Organic Compounds

S/N	Parameter	Upper limit (mg/kg)
1	Benzene	5
2	Carbon Tetrachloride	5
3	1,2- Dichloromethane	5
4	1,1- Dichloromethane	0.5
5	cis-1,2- Dichloromethane	40
6	trans-1,2-Dichloromethane	60
7	Dichloromethane	90
8	Ethyl benzene	200
9	Styrene	1,000
10	Tetrachloroethylene	50
11	Toluene	500
12	Trichloroethane	30
13	1,1,1- Trichloroethane	600
14	1,1,2-Trichloroethane	10
15	Total Xylenes	200

Table 43: Contaminant Limits for Heavy Metals

S/N	Parameter	Upper limit (mg/kg)
1	Arsenic	1
2	Cadmium	1
3	Hexavalent Chromium	100
4	Lead	200
5	Manganese	1,800
6	Mercury	2
7	Nickel	100
8	Selenium	20
9	Copper	200
10	Zinc	150
11	Molybdenum	5

Table 44: Contaminant Limits for Pesticides

S/N	Parameter	Upper limit(mg/kg)
1	Atrzine	50
2	2,4-Dichlorophenox acetic acid (2,4-D Amine)	700
3	2,4-Dichlorophenox acetic acid Amine (2,4-D Amine)	700
4	Lindane	2
5	Pentachlorophenol	20
6	Sulphur	500
7	Endosulfan	60
8	Glyphosate	700
9	Acetochlor	500
10	Carbofuran	200
11	Paraquat	300
12	Diquat	150
13	**Chlordane	0.6
14	*DDT	3
15	**Dieldrin	0.05
16	**Heptachlor	0.2
17	**Toxaphene	0.6
18	**Aldrin	0.05
19	**Hexachlorobenzene	500

Table 45: Contaminants Limits for Other Chemicals

S/N	Parameter	Upper limit(mg/kg)	Test method (see clause 2)
1	Benzo (a) pyrene	1.0	***
2	Cyanide	10	TZS 977-ISO 10382
3	Polychlorinated Biphenyls (PCBs)	1.0	TZS 977-ISO 10382
4	Vinyl Chloride	1.0	***
5	Polychlorinated Dibenzo Dioxins	100ng TEQ/kg	***

6.1.2.3 Discharge of Effluent Standards

For discharge of effluent standards the harmonisation is looking into the following areas; parameter, effluent standards and standard for receiving water. Based on the practices in East Africa and

elsewhere the study has harmonised the following discharge of effluent standards to be applicable in EAC as presented in Table 46.

Table 46: Harmonised Standards for effluents and receiving waters

Parameter	Unit	Effluent Standard		Standard for receiving water			
		TCL	MPC	TL	MPC 1	MPC 2	MPC 3
PH		-	6.5-8.5	-	6.5-8.5	6.5-8.5	6.5-9.0
TDS	mg/l	2500	3000	1700	2000	2000	2000
TSS	mg/l	60	100	-	-	-	-
Conductivity	uS/cm^3	400	-	-	-	-	-
BOD_5	mg/l	25	30	3.5	5	5	10
COD	mg/l	45	60	-	-	-	-
Chloride-Cl	mg/l	650	800	170	200	200	400
Sulphate-SO_4	mg/l	500	600	500	600	600	600
Ammonia-N	mg/l	7.5	10	0.35	0.5	0.5	0.5
Nitrate- N	mg/l	35	50	35	50	50	100
TDS	mg/l	2500	3000	1700	2000	2000	2000
TSS	mg/l	60	100	-	-	-	-
Conductivity	uS/cm^3	400	-	-	-	-	-
BOD_5	mg/l	25	30	3.5	5	5	10
COD	mg/l	45	60	-	-	-	-
Chloride-Cl	mg/l	650	800	170	200	200	400
Sulphate- SO_4	mg/l	500	600	500	600	600	600
Ammonia-N	mg/l	7.5	10	0.35	0.5	0.5	0.5
Nitrate-N	mg/l	35	50	35	50	50	100
Nitrite-N	mg/l	0.75	I	-	-	-	-
Phosphate-PO_4	mg/l	4.5	6	-	-	-	-
Cyanide-total	mg/l	0.75	I	0.035	0.5	0.5	0.1
Cyanide –WAD	mg/l	0.35	0.5	-	-	-	-
Cyanide – Free	mg/l	0.075	0.1	-	-	-	-
Oil & Grease	mg/l	3.5	5	0.35	0.5	I	5
Phenols	mg/l	0.15	0.2	0.0015	0.002	0.002	0.1
Total hydrocarbons (dissolved & emulsified)	mg/l	-	-	-	-	-	-
Arsenic	mg/l	0.15	0.2	0.04	0.05	0.1	0.1
Cadmium	mg/l	0.075	0.1	0.04	0.GS	0.1	0.2
Chromium (total)	mg/l	0.75	1	-	-	-	-
Chromium (hex)	mg/l	0.05	0.1	0.04	0.05	0.1	0.1
Copper	mg/l	0.75	1	2.5	3	3	4
Iron (total)	mg/l	2	3	0.75	I	1.2	1.5
Lead	mg/l	0.075	0.1	0.075	0.1	0.1	0.2
Mercury	mg/l	0.004	0.005	0.00075	0.001	0.001	0.002
Nickel	mg/l	0.4	0.5	0.04	0.05	0.05	0.1
Zinc	mg/l	0.75	1	0.15	0.2	0.2	0.5

Note:

TL = Trigger level, which if exceeded, requires investigation of a potential problem and action if necessary; the level acts as a warning

6.1.3 The ones that have been developed

This study has developed two environmental standards, namely vibration and electromagnetic waves standards. For vibration, the aspects of the standards that have been looked at are daily exposure limit period, daily exposure limit value, daily exposure action value while for waves the items looked at are Effective dose limit, Effective dose limit in a single year and equivalent dose limit, in the lens of the eye, in the skin,' in the hands and feet.

6.1.3.1 Vibration Standards

Tolerance limits to protect people against risk to their health and safety are given in Tables 47 to 50. They also give tolerance limits to minimize annoyance to people from environmental vibration; the limits are applicable to residential premises and other sensitive sites.

Table 47: Tolerance Limits for Whole Body Vibration

Daily exposure limit period	**Daily exposure limit value**	**Daily exposure action value**	**Test method**
8 hours	1.15 m/s^2	0.5 m/s^2	EMDC 5 (3455), EMDC 5 (3456)

Table 48: Tolerance Limits for Hand Arm Vibration

Daily exposure limit period	**Daily exposure limit value**	**Daily exposure action value**	**Test method**
8 hours	5 m/s^2	2.5 m/s^2	EMDC 5(3453), EMDC 5 (3454)

Table 49: Tolerance Limit for Ground Vibration at Sensitive Sites

Limit on ground vibration	**Test method**
5 mm/s PPV at all times	Seismograph

Table 50: Tolerance Limits for Subsonic Vibration/ Air over Pressure

Limit on sensitive sites	**Test method**
120 dBL at all times	Seismograph

6.1.3.2 Electromagnetic Waves Standards

Occupational dose limits - The occupational exposure of any worker is controlled such that the limits presented in Table 51 are not exceeded.

Table 51: Table Occupational dose limits

1.Effective dose limit	200mSv per year, Averaged over a period of 5 consecutive calendar years
2. Effective dose limit in a single year	50mSv
3. Equivalent dose limit	
In the lens of the eye	150mSv per year
In the skin	500mSv per year
In the hands and feet	500mSv per year

The equivalent dose limit for skin applies to the dose average over any 1cm2 area of skin, regardless of the total area exposed.

For apprentices of 16 to 18 years of age who are training for employment involving exposure to radiation and for students of age 16 to 18 who are required to use sources in the course of their studies, the occupational exposure shall be so controlled that the limits presented in Table 52 are not exceeded.

Table 52: Table Occupational dose limits for apprentices of 16 to 18 years of age

.Effective dose limit	6mSv in a year
2.Equivalent dose limit	
In the lens of the eye	50mSv per year
In the skin	150mSv per year
In the hands and feet	150mSv per year

6.2 Environmental Impacts Assessment Guidelines

After reviewing the EIA guidelines, the consultant identified five (5) potential areas for harmonisation. The areas for harmonisation have followed the life cycle approach of the road project. The identified areas for harmonisation are The Environmental Assessment Process, Project Planning and Pre-feasibility Phases, Feasibility Study and Preliminary Design Phases Construction Phase – Supervision and Monitoring Traffic Operations and Road Maintenance. Detailed descriptions for this guideline are provided in Annex B 3.

6.2.1 The Environmental Assessment Process

Under the Environmental Assessment Process, the harmonisation was carried out on objectives and Functions, Steps in the Environmental Assessment Process and the Roles and Responsibilities of the Road Authority. Detailed descriptions for this guideline are provided in Annex B 3.

6.2.2 Project Planning and Pre-feasibility Phases

For this phase of the road project, the harmonisation earmarked on environmental Registration and Project Brief, Environmental Screening, Scoping of the EIA Study, Terms of Reference for the Environmental Expert and Preliminary Environmental Impact Assessment. Detailed descriptions for this guideline are provided in Annex B 3.

6.2.3 Feasibility Study and Preliminary Design Phases

The harmonisation for feasibility study and preliminary design phases focused on the EIA Study, Environmental Management Plan (EMP), Compensation and Resettlement Plan (CRP), Road Safety Audit (RSA), Submission of Environmental Impact Statement, Review of the EIS and EIA Certificate. Detailed descriptions for this guideline are provided in Annex B 3.

6.2.4 Construction Phase – Supervision and Monitoring

The construction phase of the project witnessed the harmonisation being carried out in the following areas; Environmental Follow-up Activities, Pre-construction Activities, Environmental Supervision, Environmental Compliance Monitoring, Meetings and Communication, Final Inspection and Handing Over of Site, Self-Auditing and Control Auditing. Detailed descriptions for this guideline are provided in Annex B 3.

6.2.5 Traffic Operations and Road Maintenance

Harmonisation for this phase of the road project was carried out on the Environmental Monitoring and Follow-up, The Road Authority's Environmental Auditing, Control Auditing, Environmental Management in Road Maintenance, Environmental Management of Vehicles and Traffic Operations. Detailed descriptions for this guideline are provided in Annex B 3.

6.2.6 Decommissioning

Once established it is highly unusual that roads are decommissioned. Basically decommissioning is the end of the project life. In case decommissioning for road project is called for, the decommissioning report should be prepared either as part of the EIS or separately, indicating how impacts will be dealt with, including the costs of mitigation measures. Detailed descriptions for this guideline are provided in Annex B3

6.3 Guidelines for Socioeconomic Impacts Assessments

6.3.1 Introduction

Key social issues in the context of the road projects are: poverty; gender concerns; persons with disability; HIV/AIDS and STIs (Sexually Transmitted Infections); occupational health and safety; and cultural features. All the foregoing are cross-cutting issues whose considerations need to be incorporated into all the stages of road projects.

6.3.2 Socioeconomic Impact Assessment

Generally, socio-economic impact assessments are conducted with a view to preventing or moderating unacceptable adverse social environmental effects from the proposed actions and projects.

Socioeconomic impact assessment also provides a foundation for measuring the cumulative impacts (long term) of road projects on the community's economic resources. While a new road project may create employment, influx of migrant workers may exert pressure on the existing social facilities, which leads to occupational health related problems (cholera and HIV/AIDS, for example). The degradation of natural resources may lead to scarcity of firewood and herbal medicine and land degradation causing food insecurity and deepening poverty. Detailed descriptions for this guideline are provided in Annex B 3.

6.3.3 Conducting a Socioeconomic Impact Assessment

Measuring socioeconomic impacts of a road project requires both quantitative (questionnaire surveys) and qualitative (participatory) methods and tools both of which rely heavily on community participation, including representatives of youth, women, transport operators, shop keepers and local government.

While formal quantitative/questionnaire surveys are extractive in nature, they are complementary to and informed by the participatory methods and provide precise means of verifying existing data and providing comparisons between survey sites. Participatory methods on the other hand use tools that facilitate learning between facilitators and participants without the use of pre-determined questions, but rather a selection of exercises that promote involvement of vulnerable groups, using visual techniques to aid effective communication. Detailed descriptions for this guideline are provided in Annex B 3

Whereas the quantitative methods target households, transport operators and commercial business owners, who are deemed to be the largest beneficiaries of road projects, the participatory qualitative methods incorporate the vulnerable groups, including women, youth, the elderly and PWDs, who bear a disproportionately larger share of the negative impacts.

It therefore recommended conducting socioeconomic impact assessment of any road project in EAC. Detailed descriptions for this guideline are provided in Annex B 3.

6.3.4 Guidelines for Compensation and Resettlement

Compensation is required when steps to reduce impacts on people are not possible or insufficient. Compensation provisions are supposed to provide enough resources for the affected individuals to purchase replacement properties. These provisions should also ensure that displaced people are not worse off economically and socially than before their displacement as a result of the road project. In environmental management, compensatory measures are necessary if they:

- aim to make up for losses or damages;
- are more cost-effective than mitigation (e.g. drilling wells for the community);
- provide services to the community (e.g. access roads, markets, etc.); and
- provide environmental resource "banking" (e.g. restoration of valuable habitats).

For road projects, therefore, compensation has to be paid for land, property and crops, where land is acquired for new roads, realignments, widening and dualising of carriageways and for increasing existing road reserves. However, no compensation need be paid for any buildings, property or crops that lie within a designated reserve because the *Road Act* and the *Access to Roads Act* make it an offence for anyone to develop a use within a road reserve. Often compensation provisions and property acquisition practices do not provide enough resources to enable affected people to purchase replacement assets. There are several reasons for this including:

- under-valuation of assets;
- changes in price of the alternative properties;
- timing of payments whereby delayed payments lead to loss of value (e.g. because of inflation);
- unsuitable manner of payment whereby it is not clear whether people should be paid in a lump sum or instalments; and
- misappropriation of funds earmarked for compensation

In view of the foregoing constraints, monetary compensation may not be meaningful to local communities. Consequently, there is a need to put in place a community-driven development plan to implement compensation. Detailed descriptions for this guideline are provided in Annex B 3.

Recommendation

We recommend to adopt those environmental standards that have been harmonised by EAC in its Catalogues of East African Standard. The study has harmonised the existing standards. On the other hand, the study has developed the standards which did not exist. The harmonisation and development of the environmental standards for EAC are incorporated in the manual and guidelines prepared.

7. ENVIRONMENTAL ASSESSMENT, MANAGEMENT AND STANDARDS MANUALS AND GUIDELINES

This Chapter basically gives the table of contents for the Manuals and Guidelines for the Environmental, Assessment, Management and Standards to be applicable in the road sector in EAC.

7.1 Guidelines and Manual for Environmental Assessment, Management and Standards

7.1.1 Environmental Assessment and Management

Since the bottom line of this consultancy assignment was to come up with the Environmental Assessment, Management and Standards Manual and Guidelines for Road Sector in EAC, the study has proposed the format/structure for environmental standards to be used in Road Sector in EAC. The main purpose of these guidelines is to provide the road authorities in member states with an easy guidance to mainstream environmental assessment and management into road project cycle activities. In addition it is hoped that the guidelines may serve as a useful resource on road sector environmental assessment and management for road planners and constructors as well as the relevant environmental authorities in member states and funding agencies hereby contributing to the continuous process of improving the environmental performance of the road sector in EAC. However for the road projects that will be of trans-boundary in nature, the Trans-boundary Environmental Assessment guidelines for shared ecosystems in East Africa (EA) as have been prepared by EA should apply.

The proposed table of contents for Environmental Assessment and Management are in section 7.2.1.

7.1.2 Environmental Standards to be used in Road Sector for EAC

. The manuals and guidelines for environmental quality standards are for; air quality, water quality standards, discharge of effluent/wastewater standards, noise standard, solid quality standards, vibration and electromagnetic waves and microwaves. The proposed table of contents for Environmental Quality Standards are in section 7.2.2.

7.2 The Proposed Contents of the Environmental, Management and Standards Manual and Guidelines to be Applicable to the Road Sector in EAC

7.2.1 The Proposed Contents of the Environmental Assessment and Management Manual and Guidelines

The appropriate timeline of environmental assessment and management activities in the road sector are correlated closely with the road project cycle activities. With the purpose of making the guidelines operational and logical to a road planner or a road engineer it was decided to link the description of environmental assessment and management activities to the stages of the project cycle. Hence, the guidelines are broadly structured into three parts as explained here below:

Part One: Procedures For Environmental Assessment of Road Projects: This is the aspect at the road project level whereby the environmental assessment of the road projects should be done. It is chapter two of the manual in which the following topics are covered;

(a) Topic 1 presents a definition of Environmental Impact Assessment (EIA);
(b) Topic 2 contains purpose of EIA
(c) Topic 3 identifies the types of the Road Projects subject to Environmental Assessment

(d) Topic 4 describes the overall environmental assessment process;
(e) Topic 5 contains a guide to environmental actions required during the project planning and pre-feasibility phases, i.e. environmental registration of projects, scoping of the environmental impact assessment (EIA) study and preparation of Terms of Reference (ToR) for environmental experts;
(f) Topic 6 contains a guide to environmental actions to be taken during the feasibility and preliminary design phases of a road project, including the conduct of the EIA study and preparation of draft and final environmental impact statement (EIS) with environmental management plan (EMP), and obtaining EIA certificate;
(g) Topic 7 provides a guide on how environmental issues should be incorporated in the tendering and contracting process, and how measures to mitigate negative impacts of the road projects should be incorporated into the detailed design of the road;
(h) Topic 8 provides a guide on requirements for environmental supervision and monitoring during construction (site preparation, construction works, demolition of construction works);
(i) Topic 9 provides a guide to environmental management during operation of the road,
(j) Topic 10 provides environmental decommissioning;
(k) Topic 11 deals with Guidelines for Socioeconomic and Cultural Impacts Assessments
(l) Topic 12 contains Compensation and Resettlement Guidelines.

Part Two: General Environmental Protection and Management: It is an aspect that the road is operating whereby the road facility is already in place and the road authority in a member state for operating the road or so called road operator has to ensure that she stick to environmental management and operation. This is chapter three of the manual with the following topics covered;

(a) Soil Erosion Protection
(b) Vegetation Protection
(c) Liquid and Solid Waste Management
(d) Atmospheric Emission Protection/Management
(e) Air Pollution Control
(f) Noise Protection
(g) Lighting Management
(h) Historical Site Protection
(i) Management of Hazardous Substance
(j) Land Tenure Management
(k) Blasting and Explosive Management
(l) Accident and Transportation of Materials
(m) Compensation Arrangements
(n) Contractors Employees Protective Gears
(o) Environmental Management Issues into Contracts

Part Three is appendices which include environmental quality standards, submission forms, checklists, examples and templates. This aspect forms an integral part of the guidelines. The following appendices are part of these guidelines;

(a) Appendix 1 - List of Environmental Management Activities for Each Project Phase
(b) Appendix 2 - Environmental Registration and Project Brief Form;
(c) Appendix 3 - Checklist on Environmentally Sensitive Areas and Ecosystems; and
(d) Appendix 4 - Template for Terms of Reference for an Environmental Expert
(e) Appendix 5 - Checklist for Identification of Environmental Impacts;
(f) Appendix 6 - Method of Determining the Intensity and Significance of Impacts;
(g) Appendix 7 - Example of a Summary Table for Description and Evaluation of Environmental Impacts;
(h) Appendix 8 - List of Issues to be covered in an Environmental Impact Statement (EIS);
(i) Appendix 9 - Example of an Environmental Management Plan (EMP);
(j) Appendix 10 - Example of a Summary Table of an Environmental Management Plan (EMP);

(k) Appendix 11 - Example of an Environmental Strip Map Presenting Impacts and Mitigation Measures;
(l) Appendix 12 - Environmental Impact Statement (EIS) Submission Form;
(m) Appendix 13 - EIA certificate forms; and
(n) Appendix 14 - Form for Application of Variation of EIA Certificate
(o) Appendix 15 - Checklist on Environmental Issues to be considered in the Design of the Road;
(p) Appendix 16 - Example of Environmental Contract Clauses for Use in Tender Documents and Contract Agreements
(q) Appendix 17 - Forms for Monitoring of Construction Works
(r) Appendix 18 - Checklist for Road Maintenance
(s) Appendix 19 - Checklist for Semi-annual reporting
(t) Appendix 20 - Air Quality Standards
(u) Appendix 21 - Water Quality Standards
(v) Appendix 22 - Noise Quality Standards
(w) Appendix 23 - Soil Quality Standards
(x) Appendix 24 - Standards for Discharge of Effluent/Wastewater Standards
(y) Appendix 25 - Vibration Standards
(z) Appendix 26 - Electromagnetic Waves Standards
(aa) Appendix 27: Methodologies for Socioeconomic Impacts Assessments
(bb) Appendix 28: Implementation Checklist for Compensation and Resettlement Plan
(cc) Appendix 29: Compensation and Resettlement Plan Reporting Format

7.2.2 The Proposed Contents of the Environmental Standards Manuals and Guidelines

The study has proposed the structure of the manual and guideline for each environmental standard. The proposed content for each standard are as follow;

- Title Page: EAC Standard for (a given environmental standard)
- Inside Pages:(page no 1)
    - EAC standards number
    - © EAC 2011
- Subsequent pages
    - Foreword
    - Scope
    - Normative References
    - Definitions of Terms and Phrases
    - Requirements (in here permit limits and methods of testing are included)
    - Compliance with specified effluent limits
    - Bibliography (References)

7.3 Guidelines and Manuals for Environmental Assessment, Management and Standards Prepared

After reviewing different literature and best practice elsewhere the study has prepared the guidelines and manuals for environmental assessment, management and standards for harmonised and developed standards as it has already been explained. The detailed guidelines and manuals are presented in Annex B3.

GUIDELINES AND MANUALS FOR ENVIRONMENTAL STANDARDS

EAC Standards for Noise Pollution Control Standards

EAC standards number

Acoustics –General Tolerance Limits for Environmental Noise

Foreword
Noise pollution is essentially an urban problem. There are evidences suggesting that noise levels can cause various physiological and psychological health problems ranging from annoyance and disturbance to heart diseases. In addition hearing damage caused by loud noise can be irreversible.

Noise pollution may be regarded as special mainly because personal and subjective judgment is a big part of recognizing a sound as noise pollution or not. In addition, the damage is localized and sporadic in comparison to other types of pollution, for example water and air pollution.

The problem of noise pollution is exacerbated by improper land use planning in most of our cities, municipalities and towns. This standard is developed partly due to the requirements of the environmental laws in EAC member states and partly because of the public outcry on loud noises emanating from various locations including places of entertainment, industries and households. Therefore, the limit values provided by this Standard will provide the basis for authorities to assess and manage environmental noises.

Scope
This standard specifies limits for environmental noise only. It is not applicable for noises in the occupational environment.

NOTE – In this Standard, quantities are expressed as levels in decibels.

Normative references
The following referenced documents are indispensable for the application of this Standard:

IEC 61672-1, Electro acoustics –Sound level meter – Part 1: Specifications

Definition of terms and phrases
Annoyance
A feeling of displeasure evoked by noise, or any feeling of resentment, discomfort or irritation occurring when noise intrudes into another person's thoughts or mood or interference with any activity being done by the affected person.

A- Weighted Sound Level
Single value number of the magnitude of sound at a specific location and time which has been electronically filtered (or weighted) to approximate the frequency sensitivity of the human ear.

Environmental noises (also called community noise, residential noise or domestic noise)
Noise emitted from all sources except noise at the industrial workplace.

C-weighted sound level - A standard weighting of the audible frequencies used for the measurement of Peak Sound Pressure level.

dBA - Unit in decibel for an A-weighted sound level (for quite sounds).
dBC - Unit in decibel for a C-weighted sound level.

Decibel - A unit used to express the intensity of a sound wave. This intensity in dB is equal to 20 times the common logarithm of the ratio of the pressure produced by the sound wave reference pressure (typically 1 micropascal at 1 meter).

Disturbances - Any act or instance of interrupting the rest, calm, attention or quite of another person

Equivalent sound levels (LeqT) - The level of a steady sound that has the same acoustical energy as does a time varying sound over a stated time period "t" (t is the time period in seconds, minutes, or hours; e.g., the hourly equivalent sound level is symbolized as LAeq (1h), the 20- minutes equivalent sound level is symbolized as LAeq (20min).

Impulsive noises - A noise consisting of one or more bursts of sound energy of duration of less than one second.

Intermittent noises - A noise whose level suddenly drops to several times the level of the background noise.

Noises - Any unwanted and annoying sound that is intrinsically objectionable to human beings or which can have or is likely to have an adverse effect on human health or the environment.

Noise pollution -Release of uncontrolled noise that is likely to cause danger to human health or damage to the environment.

Permissible noise levels - The levels of noise prescribed

Sound - A fluctuation in a pressure, particle displacement, or particle velocity propagated in any medium or the auditory sensation that may be produced.

Place of entertainment - A building or other place where activities of amusement, entertaining, playing of music, dancing, performing of shows takes place.

Requirements Tolerance limits for environmental noise shall be as shown in Tables 53 to 56.

Table 53: Classification of Land Use Categories

Class	Land use category	Description
Type A	Institutional areas	Areas where quietness required and where welfare institutions are concentrated (Hospitals, Public courts, etc)
Type B	Residential/ Institutional	Areas with both residential and institutional buildings and areas with open and low density buildings as well as apartment houses (e.g. schools, offices, etc)
Type C	Recreational areas	Areas with recreational centres and houses, recreational areas for public use and nature reserve areas
Type D	Residential/ Commercial	Areas allocated for both residential and commercial activities such as shopping / market areas, etc
Type E	Trade/ Commercial/ Residential	Includes light industry, stores, repair shops, etc Unplanned areas without strong connection between trade and owners of dwellings City centre areas with high concentration of shops (Central Business District)
Type F	Industrial areas	Areas allocated exclusively for industrial activities for which it is difficult or very costly to reduce noise
Type G	Open country/ Undeveloped lands	Agricultural areas/rangelands

Table 54: Standard noise values for different types of land use categories

Area	Standard Value (dBA)	
	Day Time	Night Time
Type A	50 or less	40 0r less
Type B	50 or less	45 or less
Type C	55 or less	45 or less
Type D	60 or less	50 or less
Type E	65 or less	55 or less
Type F	70 or less	70 or less

Table 55: Noise standards for areas facing roads

Area class	Standard value (dB A)	
	Day Time	Night Time
Area Type A facing roads with two or more lanes	50 or less	45 or less
Area Type B facing roads with two or more lanes and Areas Type C facing a road with one or more lanes	55 or less	45 or less

Note: Lane = refers to a longitudinal strip of road with uniform width to enable a single line of cars to travel safely and without hindrance

Table 56: Noise emission standards for construction equipment and small and large vehicles

Equipment/Vehicle	Noise limit (dB A)
Small motorbike or scooter	80
Passenger car	82
Small bus or commercial vehicle	85
Medium bus or commercial vehicle	89
Large bus or commercial vehicle	91
Compactors (rollers), front loaders, concrete mixers, cranes (movable)	75
Dozers, graders, trucks, jack hammers	75

For noise measurements reporting the following information based on ISO 1996 shall be mandatory:

- The purpose of the measurement
- The standard used
- Equipment used, including serial numbers
- Map showing position of sound

Monitoring

Measurement of noise levels shall be done at the receiving point. Measurement within buildings shall be done with windows and doors wide opened.

GUIDELINES AND MANUALS FOR ENVIRONMENTAL STANDARDS

EAC Standards for Soil Water Quality Standards

EAC standards number

Soil Quality – Limits for Soil Contaminants in Habitat and Agriculture

Foreword

Soil is among the most abused component of the environment. Polluted waters and air will in many cases unload the pollutant into the soil and vice versa. The land is also affected through anthropogenic activities such as mining, agricultural activities, as well as solid and liquid waste disposal.

Hence, a variety of chemicals, both organic and inorganic compounds from these activities contaminate the soil in varying degrees. Examples of such compound include pesticides from agriculture, heavy metals from mining, smelting processes and fuel combustion and hydrocarbons from haphazard disposal of wastes such as petroleum, used oil and oil sludge.

Various health consequences may arise from exposure to contaminated oil depending on pollutant type, pathway of attack and vulnerability of the exposed population. For example, chromium and many of the pesticide and herbicide are carcinogenic to all populations. Soil contaminants can also have significant deleterious consequences for ecosystems such as alteration of metabolism of endemic microorganisms and arthropods resident in a given soil environment.

Although agriculture, mining and various industrial activities are crucial for economic growth, they need to be monitored because of their impact to the environment. This standard aims at protecting agricultural and habitat soil from being polluted by such activities.

During the formulation of this standard, a number of factors were considered including *inter alia*, state-of-EAC agricultural activities and research findings on natural levels of organic and inorganic substances/compounds in soil, safe limits from the literature and limits/standards of their countries in particular Thailand, Canada, Taiwan and USA.

Scope

This standard sets limits for soil contaminants in agriculture and habitat.

Normative references

ISO 15009, Soil quality – *Gas chromatographic determination of the content of volatile aromatic hydrocarbons, naphthalene and volatile halogenated hydrocarbons – Purge-and-trap method with thermal desorption*

ISO 11047, Soil quality – *Determination of cadmium, cobalt, copper, lead, manganese, nickel and zinc in aqua regia extracts of soil – Flame and elecrtrothermal atomic absorption spectrometric methods*

ISO 16772, Soil quality – *Determination of mercury in aqua regia soil extracts with cold-vapour atomic spectrometry or cold-vapour atomic fluorescence spectrometry*

ISO 11264, Soil quality – *Determination of herbicides – Method using HPLC with UV-detection*

ISO 10382, Soil quality – *Determination of organochlorine pesticides and polychlorinated biphenyls – Gas-chromatographic method with electron capture detection.*

Definition of terms and phrases

Contaminated soil

Soil which contains one or more contaminants from an unintentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous substance, hazardous waste, or pollutant.

Contaminant
Substance or agent present in the soil as a result of human activities which impairs the origin state/quality/function of that soil.

Degraded land
Land which, due to natural processes or human activity, is no longer able to properly sustain an economic function and/or its original natural, or near-natural, ecological function.

Degraded soil
Soil whose natural properties or productivities have been damaged by contamination or physical or other processes.

Habitat
The area or environment where an organism or ecological community normally lives or concentration causes adverse impacts on soil functions.

Pollutant
Substance or agent present in the soil (or ground water) which due to its properties, amount or concentration causes adverse impacts on soil functions.

Soil
Upper layer of the earth's crust composed of mineral parts, organic substance, water, air and living water.

Subsoil

Volume underlying the topsoil and overlying the solid (parent) rock beneath.

Topsoil
Upper part of natural soil which is generally darker in colour and has higher content of organic substances and nutrient when compared to the subsoil below.

Requirements
The contaminant in habitat and agriculture soil shall have limits as specified in Tables 57 to 60.

Table 57: Contaminant limits for volatile organic compounds

S/N	Parameter	Upper limit (mg/kg)	Test method
1	Benzene	5	TZS 973-ISO 15009
2	Carbon Tetrachloride	5	***
3	1,2- Dichloromethane	5	TZS 973-ISO 15009
4	1,1- Dichloromethane	0.5	TZS 973-ISO 15009
5	cis-1,2- Dichloromethane	40	***
6	trans-1,2-Dichloromethane	60	***
7	Dichloromethane	90	TZS 973-ISO 15009
8	Ethyl benzene	200	TZS 973-ISO 15009
9	Styrene	1,000	***
10	Tetrachloroethylene	50	***
11	Toluene	500	ISO 15009:2002 (E) TZS 973
12	Trichloroethane	30	***
13	1,1,1- Trichloroethane	600	TZS 973-ISO 15009
14	1,1,2-Trichloroethane	10	TZS 973-ISO 15009
15	Total Xylenes	200	TZS 973-ISO 15009

Table 58: contaminant limits for heavy metals

S/N	Parameter	Upper limit (mg/kg)	Test method
1	Arsenic	1	***
2	Cadmium	1	TZS 974-ISO 11047
3	Hexavalent Chromium	100	TZS 974-ISO 11047
4	Lead	200	TZS 974-ISO 11047
5	Manganese	1,800	TZS 974-ISO 11047
6	Mercury	2	TZS 974-ISO 11047
7	Nickel	100	TZS 974-ISO 11047
8	Selenium	20	***
9	Copper	200	TZS 974-ISO 11047
10	Zinc	150	TZS 974-ISO 11047
11	Molybdenum	5	***

Table 59: Contaminant limits for pesticides

S/N	Parameter	Upper limit(mg/kg)	Test method
1	Atrzine	50	TZS 976-ISO 11264
2	2,4-Dichlorophenox acetic acid (2,4-D Amine)	700	***
3	2,4-Dichlorophenox acetic acid Amine (2,4-D Amine)	700	***
4	Lindane	2	GC (AOAC Methods,1984, JAOAC, 1980, Pesticides Analytical Manual, 1979)
5	Pentachlorophenol	20	TZS 977-ISO 10382
6	Sulphur	500	Titrimetry (CIPAC Handbook)
7	Endosulfan	60	GC with MCD or ECD (Analytical Methods Residue Pesticides, 1988, Part 1)
8	Glyphosate	700	HPLC (Pesticide Analytical Manual,1999 II)
9	Acetochlor	500	GC With ECD or FID
10	Carbofuran	200	GC (Analytical Methods Residue Pesticides, 1988, Part 1)
11	Paraquat	300	Colorimetry (Pesticides Analytical Manual, 1979 II)
12	Diquat	150	Colorimetry (Pesticides Analytical Manual, 1979 II, Analytical Methods Plant Growth Regulators, 1978)
13	**Chlordane	0.6	***
14	*DDT	3	TZS 977-ISO 10382
15	**Dieldrin	0.05	TZS 977-ISO 10382
16	**Heptachlor	0.2	TZS 977-ISO 10382
17	**Toxaphene	0.6	***
18	**Aldrin	0.05	TZS 977-ISO 10382
19	**Hexachlorobenzene	500	TZS 977-ISO 10382

Table 60: Contaminants limits for other chemicals

S/N	Parameter	Upper limit(mg/kg)	Test method
1	Benzo (a) pyrene	1.0	***
2	Cyanide	10	TZS 977-ISO 10382

3	Polychlorinated Biphenyls (PCBs)	1.0	TZS 977-ISO 10382
4	Vinyl Chloride	1.0	***
5	Polychlorinated Dibenzo Dioxins	100ng TEQ/kg	***

*= Restricted by Stockholm Convention on Persistent Organic Pollutants (POPs) to which EAC is a Party.
** = Banned by Stockholm Convention on Persistent Organic Pollutant (POPs) to which Tanzania is a Party.
*** = No reference method has been specified, hence currently no restriction on test methods as long as they give reliable results.

References

Pollution Control Department, Ministry of Natural Resources and Environment of the Royal Government of Thailand (2004), "*Notification of National Environmental Board No.25, B.E."* issued under the Enhancement and Conservation of National Environment al Quality Act.

Iowa Department of Natural Resources, (1999). Statewide Standards for contaminants in soil and ground water. Unpublished www.iowadnr.com/land/consites/lrp/documents/conlrptable2.pdf

Ontario Ministry of Environment and Energy, Standards Development Branch (1996). Upper Concentration Limits for Soil and Groundwater http://www.ene.gov.on.ca/envision/gp/326701e.htm

Taiwan soil pollution control standards. Environmental Protection Administration (2003). www.law.epa.gov.tw/en/laws/278076101.pdf

GUIDELINES AND MANUALS FOR ENVIRONMENTAL STANDARDS

EAC Standards for Discharge of Effluent Standards

EAC standards number

Municipal and Industrial Wastewaters: General Tolerance Limits for Municipal and Industrial Wastewaters

Foreword

Municipal and industrial wastewaters are important point source potential pollutants. They are frequently viewed by much of the public as being responsible for most of the water pollution problems in the country. They generally contribute oxygen demanding substances, suspended matter, pathogens and many specific chemicals, including heavy metals. The pollutants are capable of causing a wide variety of problems in watercourses or downstream uses. Effluent disposed of on land may seep into aquifers and pollute groundwater. The problems associated with municipal and industrial wastewater pollution include damage to marine life, wildlife resources and human health. Thus, to ensure sustained water quality and health aquatic ecosystems and human health in general, monitoring of effluents and compliance to the standards according to law is of paramount importance. In this regard, monitoring against standards proves to be an important component of a sound environmental management programme.

In EAC, environmental pollution resulting from municipal and industrial discharges is growing fast. In municipalities, the rapidly growing pollution and high rate of industrial growth are by and large responsible for increasing waste discharges. Both land and water bodies within and around urban centres and those in which small-scale mining activities are being carried out are increasingly coming under threat as they continue to receive wastewaters laden with hazardous pollutants.

Generally, the influents of municipal and industrial origin are discharged into water bodies and municipal sewers and treatment facilities.

The effluents are varied and complex and the degree of their pollution effect upon the aforementioned systems depend on the constituents of the individual effluent and corresponding concentrations/load. The rationale for including permissible limits with regard to physical parameters, organic and inorganic substances as well as microbiological component is based upon their detrimental effect upon human health, aesthetic value, aquatic environmental and treatment facilities.

Scope

This standard is applicable to effluent discharged from all establishments. The standard prescribes the permissible limits for municipal and industrial effluents discharged directly into water bodies.

The effluent parameters contained herein include Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Color, pH, Temperature, Total Suspended Solids (TSS) and Turbidity.

Also this standard gives permissible limits for inorganic substances including Aluminium (as Al), Arsenic (As), Barium (Ba), Cadmium (Cd), Chlorides(Cl^-), Chromium VI, Cobalt (Co), Copper(Cu), Fluorides(F^-), Iron, Lead (Pb), Manganese, Mercury (Hg), and Nickel (Ni). Other are Selenium (Se), Silver (Ag), Sulphate(SO_4^-), Sulphides (S^-),Tin (Sn), Total Chromium, Total Kjeldahl Nitrogen (N), Nitrates (NO_3^-), Total Phosphorus (P), Zinc (Zn), and Vanadium.

Organic substances whose permissible limits are included in this standard are 1,1,1-Trichloroethane, 1,2- Dichloroethylene, 1,1,2- Trichlorodethane, 1,2- Dichloroethane, 1,3-Dichloropropane, *cis*-1,2-Dichloroethylene, Dichloromethane, Phenols, Tetrachloroethylene, Tetrachloromethane, Trichloroethylene as well as other aliphatic aromatic hydrocarbons (excluding the mentioned ones).Others are aromatic amines, alkyl benzene sulfonate (ABS), oil and grease (Petroleum Ether Products), organochlorine pesticides and other pesticides(excluding the organochlorine pesticides).

Permissible limit for microbiological coliform organisms is also given in this standard.

The standard does not cover requirements for hazardous effluents such as radioactive materials and hospital wastes. Restricted and banned chemicals under Rotterdam and Stockholm conventions, which have already been ratified by EAC.

Purpose
The purpose of the standard is to indicate the quality of effluents permitted to be discharged into water bodies. The use therefore is meant to promote a consistent approach towards prevention of water pollution in EAC.

In this regard, the wastewaters to be discharged into receiving waters should be free from:

- Substances that will settle in receiving waters forming putrescent or otherwise objectionable sludge deposits, or that will adversely affect aquatic life.
- Floating debris and other material in amounts sufficient to be noticeable and lead to deterioration of receiving waters.
- Nutrients in concentration that promote nuisance growth of algae or aquatic weeds in the receiving waters.
- Materials in quantities or concentrations which are toxic or harmful to life.
- Materials that alone or in combination with other materials will produce colour, turbidity, and odour in sufficient concentration to create a nuisance or adversely affect the aquatic ecosystem.

Normative references
The following standards contain provisions, which, through reference in this text, constitute provisions of this standard. All standards are subject revision and parties to agreements based on these standards are required to investigate the possibility of applying the most recent editions of the standards below:

American Public Health Association (APHA), 1989, Standard method of the examination of water and waste water.

ISO 6222: 1999, Water quality – Microbiology methods.

ISO 6468: 1996, Water quality – Determination of certain organ chlorine insecticides, polychlorinated biphenyls and chlorobenzenes – Gas Chromatographic method after liquid – Liquid extraction.

ISO 7875 – 1: 1996, Determination of surfactants – Part 1: Determination of anionic surfactants by measurement of the methylene blue index

ISO 7887: 1994, Water quality – Examination and determination of colour using optical instruments
ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods.

ISO 15586: 2003, Water quality – Determination of trace element using atomic absorption spectrometer with graphite furnace.

Definitions of terms and phrases
For the purpose of this Standard, and the normative references, unless the context specifically indicates otherwise, the following terms and phrases shall have the meanings respectively ascribed to them by the section.

Biochemical Oxygen Demand (BOD)

The mass concentration of dissolved oxygen consumed under specified conditions by the biological oxidation of organic and/or inorganic matter in waste water.

Chemical Oxygen demand (COD)
The mass concentration of oxygen equivalent to the amount of dichromate consumed by dissolved and suspended matter when a sample of wastewater is treated with that oxidant under defined conditions.

Effluent - Water or wastewater discharged from a containing space such as treatment plant, industrial process, lagoon, etc.

Hazardous wastes - Any discarded material containing substances know to be toxic, mutagenic, carcinogenic, or teratogenic to humans or other life forms; ignitable, explosive, or highly reactive alone or with other materials.

Industrial Influents - Liquid wastes from institutional, commercial and industrial processes and operations.

Kjeldahl nitrogen - The concentration of organic nitrogen and ammonia cal nitrogen in wastewater sample, determined after mineralization. It does not include nitrate and nitrate nitrogen, and does not necessarily include all organically bound nitrogen.

Monitoring - The long term programmed process of sampling, measurement and subsequent recording, reporting or signalling, or both, of various wastewater characteristic with the aim of assessing compliance with specified standards.

Municipal effluent - Liquid wasted from domestic processes and operations.

Organic nitrogen - The different between the nitrogen contents of a sample derived from the determination of kjedahl nitrogen ammoniacal nitrogen.

Pollution - The introduction by man, directly or indirectly, or substances or energy into the environment resulting in deleterious effects of such a nature as to endanger human health, harm leaving resources and ecosystems, and impair or interfere with amenities and other legitimate uses of the environment.

Receiving water - A perennial body of water, stream and watercourse receiving the discharged effluent.
Suspended solid - Solid that either floats on the surface of, or in suspension in water, sewage or other liquids and which are removable by laboratory filtering or centrifuging under specified conditions.

Treatment facilities - An arrangement of devices and structures, excluding septic tanks, constructed for the purpose of treatment of wastewaters for domestic, commercial, and industrial sources, or combination thereof. Privately owned wastewater treatment facilities which treat predominantly industrial waste shall be excluded.

Total phosphorus - The sum of all forms of phosphate normal present in wastewater, including orthophosphates, polyphosphates, metaphosphates, pyrophosphates and organic phosphates, expressed on terms of concentration of P (Phosphorus)

Wastewater - Water discharged after being used, or produced by a process, and which is of no further immediate value to that process.

Water pollution -The impairment of suitability of water from some considered purpose.

Requirements -

The permissible limits for municipal and industrial wastewaters shall be as shown in Table 61a-d.

Table 61 – Permissible limits

(a) – Physical components

Parameter	Limit	Test method
BOD_5 at 20 ^oC	30mg/L	TZS 861: Part 3
COD	60mg/L	TZS 861: Part 4 – Dichromate digestion methods
Colour	300 TCU	ISO 7887: 1994, water quality - Examination and determination of color – Section 3: Determination of true color using optical instruments
pH range	6.5-8.5	TZS 861: Part 2 – Electrometric method
Temperature range	20-35^{0}C	See annex A
Total Suspended Solids (TSS)	100 mg/L	TZS 861: Part 1 – Gravimetric method
Turbidity	300 NTU	APHA Standard methods: 2130 B. Nephelometric method

(b) – Inorganic components

Parameter	Limit(mg/L)	Test method
Aluminium(as Al)	2.0	TZS 861: Part 7 – Direct nitrous oxide-Acetylene flame atomic absorption spectrometry
Arsenic (As)	0.2	TZS 861: Part 8 – Manual hydride generation – Atomic absorption spectrometry
Barium (Ba)	1.5	TZS 861: Part 7 - Direct nitrous oxide-Acetylene flame atomic absorption spectrometry
Cadmium(Cd)	0.1	TZS 861: Part 7 - Flame atomic absorption spectrometry
Chromium (total)	1.0	TZS 861: Part 7 – Flame atomic absorption spectrometry
Chromium VI	0.1	TZS 861: Part 9 – Colorimetric method
Chlorides (Cl^-)	200	APHA Standard Methods: 4110 B. Ion Chromatography with chemical suppression of eluant conductivity
Cobalt (Co)	1.0	TZS 861: Part 7 – Flame atomic absorption spectrometry
Copper	2.0	TZS 861: Part 7 – Flame atomic absorption spectrometry
Fluorides(F^-)	8	APHA Standard Methods: 4110 B. Ion Chromatography with chemical suppression of eluant conductivity
Iron	5.0	TZS 861: Part 7 – Flame atomic absorption spectrometry
Lead (Pb)	0.1	TZS 861: Part 7 – Flame atomic absorption spectrometry
Manganese	5.0	TZS 861: Part 7 – Flame atomic absorption spectrometry
Mercury (Hg)	0.005	TZS 861: Part 10 – Cold-vapor atomic absorption spectrometry
Nickel (Ni)	0.5	TZS 861: Part 7 – Flame atomic absorption spectrometry

Nitrates (NO_3^-)	20	APHA Standard Methods: 4110 B. Ion Chromatography with chemical suppression of eluant conductivity
Phosphorus Total(as P)	6	TZS 861: Part 6 – Colorimetric-ascorbic acid method
Selenium (Se)	1.0	TZS 861: Part 8 – Manual hydride generation- Atomic absorption spectrometry.
Silver (Ag)	0.1	ISO 15586: 2003,Water quality Determination of trace elements using atomic absorption spectrometer with graphite furnace
Sulphate (SO_4^{2-})	500	APHA Standard Methods: 4110 B. Ion Chromatography with chemical suppression of eluant conductivity
Sulphides (S^-)	1	APHA Standard Methods: 4110 B. Ion Chromatography with chemical suppression of eluant conductivity
Tin (Sn)	2.0	TZS 861: Part 7 – Flame atomic absorption spectrometry
Total Kjeldahl Nitrogen (as N)	15	TZS 861: Part 5 – Kjeldahl method
Vanadium	1.0	ISO 15586: 2003,Water quality Determination of trace elements using atomic absorption spectrometer with graphite furnace
Zinc (Zn)	5.0	TZS 861: Part 7 – Flame atomic absorption spectrometry

(c) – Organic components

Parameter	**Limit(mg/L)**	**Test method**
1, 1, 2 – Trichloroethane	0.06	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
1, 1, 1 – Trichloroethane	3.0	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
1,2 - Dichloroethylene	0.2	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
1,2 - Dichloroethane	0.04	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
1,3 - Dichloropropene	0.2	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
Alkyl benzene sulfonate (ABS)	0.5	ISO 7875 - 1: 1996, Determination of surfactants - Part 1: Determination of anionic surfactants by measurement of the methylene blue index (MBAS)
Aromatic nitrogen containing compounds (e.g.,aromatic amines)	0.001	APHA standard methods 6410: Liquid-liquid extraction GC/MS method
Cis-1,2-Dichloroethylene	0.4	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
Dichloromethane	0.2	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)

Oil and grease (fatty matters and hydrocarborns)	10	APHA standard methods 5520
Organochlorine pesticides (CI)	0.0005	GC ECD (ISO 6468: 1996, Water quality – Determination of certain organochlorine insecticides, polychlorinated biphenyls and chlorobenzenes – Gas chromatographic method after liquid-liquid extraction)
Other aromatic and/or aliphatic hydrocarbons not used as pesticides	0.05	GC ECD (ISO 6468: 1996, Water quality – Determination of certain organochlorine insecticides, polychlorinated biphenyls and chlorobenzenes – Gas chromatographic method after liquid-liquid extraction)
Pesticides other than organochlorines	0.01	GC ECD (ISO 6468: 1996, Water quality – Determination of certain organochlorine insecticides, polychlorinated biphenyls and chlorobenzenes – Gas chromatographic method after liquid-liquid extraction)
Phenols	0.002	GC ECD (ISO 6468: 1996, Water quality – Determination of certain organochlorine insecticides, polychlorinated biphenyls and chlorobenzenes – Gas chromatographic method after liquid-liquid extraction)
Tetrachloroethylene	0.1	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)

Parameter	**Limit(mg/L)**	**Test method**
Tetrachloromethane	0.02	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
Trichloroethylene	0.3	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)

(d) Microbiological components

Parameter	**Limit**	**Test method**
Total coliform organisms	10,000 counts/100mL	ISO 6222:1999,Microbiological methods

Compliance with specified effluent limits

Discharging of wastewaters in water bodies should ensure that:

- Effluent quality described in table1 is achieved consistently;
- Monitoring should be done by sampling in accordance with - *Sampling methods;*
- Effluence shall be treated onsite prior to discharge, dilution is not treatment;
- Effluents are not discharged in close proximity to water supply sources and recreational areas.

Bibliography

Water environment federation (1992) *Standard Methods For Examination of water and wastewater.*

Lake Victoria Environmental Management Programme, *Proposal for National Working Group ii on Management of Water Quality and Landuse and Including Wetlands, June 1995*

ISO 2490 (Part): 1981, *Tolerance limits for industrial effluents*

National Environment Management Council, *Development of Guidelines on Effluents Standards, March 1996*

ISO Standards Compendium, *Environment – Water Quality. Vol. 1, 1994*

ISO Standards Compendium, *Environment – Water Quality. Vol. 2, 1994*

ISO Standards Compendium, *Environment – Water Quality. Vol. 3, 1994*

Environment Canada, *Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments. Regulation, Codes and Protocols Report EPS 1- EC – 76 – 1, April 1976*

Ministry of Healthy, *Report of the Effluents Standards Committee CLI/77, April 1977*

TZS 94 (Part 1) 1980, *Industrial Influents – Sampling and test methods*

Uganda Gazette-Statutory Instruments 1999 No. 5, *The National Environment (Standard for Discharge of Effluent into water or on Land) Regulations, 1999.*

United Republic Of Tanzania, *Ministry of water and Livestock Development, Regulations for receiving waters and effluents.*

GUIDELINES AND MANUALS FOR ENVIRONMENTAL STANDARDS

EAC Standards for Vibration Standards

EAC standards number

Tolerance limits for Environmental Vibration

Terminology
For the purpose of this standard, the following terms and phrases shall have the meanings respectively ascribed to them by this section.

Air Overpressure
Airborne pressure waves generated by blasting produced over a range of frequencies including those which are audible and those which are below the lower end of the audible spectrum.

Daily exposure limit period
The duration that is used as reference in defining daily exposure values

Exposure action value
The exposure action value (EAV) is the daily amount of vibration exposure value above which action must be taken to control exposure.

Exposure limit value
The exposure limit value (ELV) is the maximum permissible amount of vibration exposure value.

Exposure value, *a (8)*
Exposure value ***a (8)*** is the vibration magnitude that a person is exposed to in a day normalized to a period of 8 hours using the following formula:

$$a(8) = a\sqrt{\frac{T}{8}}$$

Where ***a*** is the vibration magnitude and *T* is the exposure period in hours

Ground vibration
Is the level of vibration (peak particle velocity) measured in mm/s in the ground anywhere on the sensitive site. The measurement point should be at least the longest dimension of the foundations of a building or structure away from the building or structure if possible.

Hand-arm vibration
Vibration which is transmitted into the hands and arms during a work activity

Occupational Environment
Is physical surrounding and social environment at workplace.

Peak Particle Velocity (V) – the maximum instantaneous sum of the velocity vectors of the ground movement measured in three orthogonal directions (expressed in millimeters per second).
The resultant PPV is calculated by producing a vector sum of the three (3) separate directional recordings:

$$V = \sqrt{v_v^2 + v_l^2 + v_t^2}$$

where; v= vertical, l=longitudinal and t=transverse for every point of the recording.

Sensitive site
Any land within 10 meters of a residence, hospital, school, or other premises in which people could reasonably expect to be free from undue annoyance and nuisance caused by vibration. The 10 meters will be measured from the boundaries of the property.

Subsonic vibration
Repetitive motion of an object with frequency lower than 20 Hz that it can not be perceived by

human ear but it can be felt.

Vibration
Is defined as mechanical oscillations or the repetitive motion of an object about an equilibrium point.

Vibration magnitude, ***a*** **for hand-arm vibration**
Vibration magnitude, ***a***, for hand-arm vibration is the root-mean-square acceleration magnitude in m/s^2 evaluated from the measurements in three orthogonal directions at the vibrating surface in contact with the hand using the following formula.

$$\boldsymbol{a} = \sqrt{a_x^2 + a_y^2 + a_z^2}$$

Where a_x, a_y and a_x are the root-mean-square acceleration magnitudes in three orthogonal directions.

Vibration magnitude, A **for whole body vibration**
Vibration magnitude, A, for whole body vibration is the root-mean-square acceleration magnitude in m/s^2 measured in one of the largest vibration of the three orthogonal directions at the supporting surface

Whole body vibration
Vibration which is transmitted into the body, when seated or standing, through the supporting surface.

Requirements
Tolerance limits to protect people against risk to their health and safety are given in Tables 62 and 63, these limits do apply mostly to occupational environment. Tables 64 and 65 give tolerance limits to minimize annoyance to people from environmental vibration, the limits are applicable to residential premises and other sensitive sites.

Table 62: Tolerance Limits for Whole Body Vibration

Daily exposure limit period	**Daily exposure limit value**	**Daily exposure action value**	**Test method**
8 hours	1.15 m/s^2	0.5 m/s^2	EMDC 5 (3455), EMDC 5 (3456)

Table 63: Tolerance Limits for Hand Arm Vibration

Daily exposure limit period	**Daily exposure limit value**	**Daily exposure action value**	**Test method**
8 hours	5 m/s^2	2.5 m/s^2	EMDC 5(3453), EMDC 5 (3454)

Table 64: Tolerance Limit For Ground Vibration At Sensitive Sites

Limit on ground vibration	**Test method**
5 mm/s PPV at all times	Seismograph

Table65: Tolerance Limits for Subsonic Vibration/ Air Over Pressure

Limit on sensitive sites	**Test method**
120 dBL at all times	Seismograph

GUIDELINES AND MANUALS FOR ENVIRONMENTAL STANDARDS

EAC Standards for Electromagnetic Waves Standards

EAC standards number

Electromagnetic Waves–Limits for occupational exposure

Definition of terms and phrases
Absorbed dose
The fundamental domestic quantity D, defined as;

$$D = \frac{dE}{dm}$$

Where *dE* is the mean energy imparted by ionizing radiation to matter volume element and *dm* is the mass of matter in the volume element. The energy can be averaged over any defined volume, the average dose being equal to the total energy imparted in the volume divided by the mass in the volume. The SI unit of absorbed dose is the joule per kilogram ($J.Kg^{-1}$), termed as gray (Gy).

Activity
The quantity A for an amount of radionuclide in a given energy state at a given time, defined as:

$$A = \frac{dN}{dt}$$

Where *dN* is the expectation value of the number of spontaneous nuclear transformations from the given energy state in the time interval *dt*. The SI unit of activity is the reciprocal second (s^{-1}), termed the Becquerel (Bq).

Dose
A measure of the radiation received or 'absorbed' by a target .The quantities termed absorbed dose , organ dose, equivalent dose ,effective dose , committed equivalent dose or committed effective dose are used ,depending on the context. The modifying terms are often omitted when they are not necessary for defining the quantity of interest.

Dose constraint
A prospective and source related restriction on the individual dose delivered by the source which serves as a bound in the optimization of protection and safety of the source. For occupation exposures, dose constraint is a source related value of individual dose used to limit the range of options considered in the process of optimization.

Dose limit
The value of the effective dose or equivalent dose to individuals from controlled practices that shall not be exceeded.

Effective dose
The quantity *E*, defined as a summations of the tissue equivalent doses, each multiplied by the appropriate tissue weighting factor:

$$E = \sum_T w_T . H_T$$

Where H_T is the equivalent dose in tissue *T* and w_T is the tissue weighting factor for tissue *T.* From the definition of equivalent dose, it follows that:

$$E = \sum_T w_T . \sum_R w_R . D_{T.R}$$

Where w_R is the radiation weighting factor for radiation *R* and $D_{T.R}$ is the average absorbed dose in the organ or tissue *T.* The unit of effective dose is $J.Kg^{-1}$, termed the sievert (Sv).

Equivalent dose
The quantity $H_{T.R}$, defined as:

$$H_{T.R} = D_{T.R} . w_R$$

Where $D_{T.R}$ is the absorbed dose delivered by radiation type *R* averaged over a tissue or organ *T* and w_R is the radiation weighting factor for radiation type *R*.

When the radiation field is composed of different radiation types with different values of w_R , the equivalent dose is:

$$H_T = \sum_R w_R . D_{T.R}$$

The unit of equivalent dose is $J.Kg^{-1}$, termed the sievert (Sv).

Exposure - The act or condition of being subject to irradiation. Exposure can be either external exposure (irradiation by sources outside the body) or internal exposure (irradiation by sources inside the body). Exposure can be classified as either normal exposure or potential exposure; occupational, medical or public exposure; and, in intervention situations, either emergency exposure or chronic exposure. The term exposure is also used in radiodosimetry to express the amount of ionization produced in air by ionizing radiation.

Exposure pathways - The routes by which radioactive material can reach or irradiate humans.

Guidance level - A level of a specified quantity above which appropriate action should be considered. In some circumstances, actions may need to be considered when the specified quantity is substantially below the guidance level.

Intervention - Any action intended to reduce or avert exposure or the likelihood of exposure to sources which are not part of controlled practice or which are out of control as a consequence of an accident.

Intervention level - The level of avertable dose at which a specific protective action or remedial action is taken in an emergence exposure situation or a chronic exposure situation.

Ionizing radiation - For the purpose of radiation protection, radiation capable of producing ion pairs in biological material(s).

Limit - The value of quantity used in certain specified activities or circumstances that must not be exceeded.

Natural exposure - An exposure delivered by natural sources.

Normal exposure - An exposure which is expected to be received under normal operating conditions of an installation or a source, including possible minor mishaps that can be kept under control.

Nuclear installations - A nuclear fuel fabrication plant, nuclear reactor (including critical and subcritical assemblies), research reactor, nuclear power plant, spent fuel storage facility, enrichment plant or reprocessing facility.

Occupational exposure - All exposures of workers incurred in the course of their work, with the exception of exposures excluded from the scope of this standard and exposures from practices or sources exempted by the Standard.

Potential exposure - Exposure that is not expected to be delivered with certainty but that may result from an accident at a source or owing to an event or sequence of events of a probabilistic nature, including equipment failures and operating errors.

Practices - Any human activity that introduces additional sources of exposure or exposure pathways or extends exposure to additional people or modifies the network of exposure pathways from extending sources, so as to increase the exposure or the likelihood of exposure of people or the number of people exposed.

Radiation weighting factor - Multipliers (as follows) of absorbed dose used for radiation protection purposes to account for relative effectiveness of different types of radiation in inducing health effects.

Table 66: Radiation weighting factor

Type and energy range of radiation	**Radiation weighing factor w_R**
Photons all energies	1
Electrons and muons, all energies*	1
Neutrons, energy	
<10 keV	5
10 keV to 100 keV	10
>100 keV to 2 MeV	20
>2 MeV to 20 MeV	10
>20 MeV	5
Protons, other than recoil protons, energy. 2MeV	5
Alpha particles, fission fragments, heavy nuclei	20

*Excluding Auger electrons emitted from nuclei to DNA, for which special microdosimetric considerations apply.

Radioactive waste - Material, whatever its physical form, remaining from practices or interventions and for which no further use if foreseen (i) that contains or is contaminated with radioactive substances and has an activity or activity concentration higher than the level clearance from regulatory requirements, and (ii) exposure to which is not excluded from the Standards.

Source - Anything that may cause radiation exposure, such as by emitting ionizing radiation or releasing radioactive substances or materials. For example, materials emitting radon are sources in the environmental sterilization gamma irradiation unit in a source for the practice of radiation preservation of food, an X ray unit may be a source for the practice of radio diagnosis, and a nuclear power plant is a source for the practice of generating electricity by nuclear power. A complex or multiple installations situated at one location or site may, as appropriate, be considered a single source for the purposes of application of this Standard.

Tissue weighing factor - Multipliers (as follows) of the equivalent dose to an organ or tissue used for radiation protection purposes to account for different sensitivities of different organs and tissues to the induction of stochastic effects of radiation.

Table 67: Tissue weighting factor

Tissue or organ	**Tissue weighting factor w_T**
Gonads	0.20
Bone marrow (red)	0.12
Colon[a]	0.12
Lung	0.12
Stomach	0.12
Bladder	0.05
Breast	0.05
Liver	0.05
Oesophagus	0.05
Thyroid	0.05

Skin	0.01
Bone surface	0.01
Remainder[b]	0.05

[a)] The weighting factor for the colon is applied to the mass average of the equivalent dose in the walls of the upper and lower large intestine.
[b)] For the purposes of calculation, the remainder is composed of adrenal glands, brain, extrathoracic region, small intestine, kidney, muscle, pancreas, spleen, thymus and uterus. In those exceptional cases in which the most exposed reminder tissue receives the highest committed equivalent dose of all organs, a weighting factor of 0.025 to the average dose in the rest of the remainder as defined here.

Worker - Any person who works, whether full time, part time or temporarily, for an employer and who has recognized rights and duties in relation to occupation radiation protection (A self-employed person is regarded as having the duties of both an employer and a worker).

Occupational dose limits - The occupational exposure of any worker shall be so controlled that the following limits (Table 68) be not exceeded:

Table 68: Occupational dose limits

1.Effective dose limit	200mSv per year, Averaged over a period of 5 consecutive calendar years
2. Effective dose limit in a single year	50mSv
3. Eguivalent dose limit	
In the lens of the eye	150mSv per year
In the skin[1]	500mSv per year
In the hands and feet	500mSv per year

The equivalent dose limit for skin applies to the dose average over any 1cm2 area of skin, regardless of the total area exposed.

For apprentices of 16 to 18 years of age who are training for employment involving exposure to radiation and for students of age 16 to 18 who are required to use sources in the course of their studies, the occupational exposure shall be so controlled that the following limits be not exceeded:

Table 69: Occupational dose limits for apprentices of 16 to 18 years of age

.Effective dose limit	6mSv in a year
2.Equivalent dose limit	
In the lens of the eye	50mSv per year
In the skin	150mSv per year
In the hands and feet	150mSv per year

In special circumstances, provided that a practice is justified as required by the Regulatory Authority but occupational exposures still remain above the dose limits, and that it can be predicted that reasonable efforts can in due course bring the occupational exposures under the limits, the Regulatory Authority may exceptionally approve a temporary change in a dose limitation requirement of this a Standard. Such a change shall be approved only if formally requested by the registrant or licensee, if the Regulatory Authority determines that the practice is still justified and is satisfied that appropriate consultation with the workers concerned has taken place.

The dose averaging period mentioned in table 3 column 1 may exceptionally be up to 10 consecutive years as specified by the Regulatory Authority, and the effective dose for any worker shall not exceed 20 mSv per year averaged over this period and shall not exceed 50 mSv in any

single year, and the circumstances shall be reviews when the dose accumulated by any worker since the start for the extended averaging period reaches 100 mSv; or

The temporary change in the dose limitation shall be as specified by the Regulatory Authority but shall not exceed 50 mSv in any year and the period of the temporary change shall not exceed 5 years.

Exemption criteria

General criterion
A practice may be exempted by the appropriate authority from implementing the measures required by this Standard provided that it can be demonstrated that individual occupational effective doses arising from the practice cannot reasonably be expected to exceed 1 mSv per year.

Criterion applicable to natural sources of radiation
In circumstances where the general criterion is not satisfied due to solely to adventitious exposure to natural sources of radiation, practices other than those specifically involving work with radiation may be exempted, as determined by the Regulatory Authority. In the case of exposure to radon in the workplace, a practice may be exempted provided that it can be demonstrated by the Regulatory Authority that the action levels for intervention are not expected to be exceeded.

7.4 Enforcement Plan

In order to implement the harmonized and developed environmental standards in EAC, it is recommended to have the enforcement plan. The enforcement plan will involve the following actions;

- Discovering Violations
- Notice of Violation (NOV)
- Response by Facility
- Orders (and Compliance Agreements
- Dispute Resolution Provisions
- Supplemental Environmental Projects (SEPs)
- Impact of Fund Availability
- Community Involvement in Enforcement Actions
- Publicizing Enforcement Actions

A description of each of the above action is given below;

7.4.1 Discovering Violations

An authority may discover or learn of violations by several means. These include 1) regular reporting required by most environmental statutes, and or inspections; 2) monitoring data; or 3) notification by the facility of violations discovered as a result of self-monitoring or auditing.

7.4.2 Notice of Violation

Generally, the authority will base its initial response to a violation on the following three factors:

- Type of violation;
- Potential risk posed by the violation; and
- Ability of the facility to address the violation.

Formal notification may be in the form of a Notice of Violation (NOV)—the initial written notice an authority will provide to require a facility to address a minor, identified violation. The NOV is tailored to address the specific circumstances presented by the situation, the violation, and applicable program-specific requirements. Formal notification also may include, depending upon the statute, an order or request to negotiate a compliance agreement or consent order.

7.4.3 Response by Facility

A facility that has received an NOV generally has two options: 1) to submit a certification of violation correction or 2) to submit a response action plan.

7.4.4 Orders and Compliance Agreements

Orders (unilateral and consensual) and compliance agreements are the primary mechanisms facility will use to address violations at the facilities. The specific type, scope, and effect of the administrative enforcement tool used for a particular violation will depend on the specific statutory authority that is available to EAC for enforcing compliance at a facility. As appropriate, the agreement or order should provide for further enforcement or penalties if the facility fails to meet the established schedules for compliance.

7.4.5 Dispute Resolution Provisions

The authority will include dispute resolution provisions in the facility settlements that may be used for resolving disputes (e.g., schedules, cleanup levels, technical reports, etc.) that may arise when implementing the terms of a signed agreement or order. In existing orders or agreements, the dispute is resolved according to the specific terms of a dispute resolution clause found in the particular compliance agreement or order.

7.4.6 Supplemental Environmental Projects (SEPs)

Consent agreements and orders may include SEPs. SEPs are defined as environmentally beneficial projects which a defendant/respondent agree to undertake in settlement of an enforcement action, but which the defendant/respondent is not otherwise legally required to perform.

7.4.7 Impact of Fund Availability

The authority shall ensure that sufficient funds for compliance with applicable environmental standards are requested in the authority budget. The authority official signing a compliance agreement or order should have the authority to obligate the funds or make the necessary budget requests to expeditiously correct the violation according to the schedule outlined in the agreement or order.

7.4.8 Community Involvement in Enforcement Actions

Community involvement may vary depending on the statute involved, the nature of the violations for which enforcement is sought, and the type of enforcement action initiated. Statutory or regulatory authority may provide for a public hearing or meeting concerning proposed orders or may allow citizens to review and provide comments on proposed plans for achieving compliance.

7.4.9 Publicizing Enforcement Actions

Actively publicizing these activities on a timely basis informs the public, the media, and the regulated community about EPA’s efforts to promote compliance and deter violations of environmental law.

8. BIBLIOGRAPHY

Catalogue of East African Standards, 2010

Kenya Environmental (Impact, Audit and Strategic Assessment) Regulations, 2003

Kenya Environmental (Prevention of Pollution in Coastal Zone and other Segment of the Environment) Regulation, 2003

Kenya Environmental Management and Coordination (Fossil Fuel Emission Control) Regulations, 2006

Kenya Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009

Kenya Environmental Management and Co-Ordination (Waste Management) Regulations, 2006

Kenya Environmental Management and Coordination (Water Quality) Regulation, 2006

Rwanda General Guidelines and Procedure for Environmental Impact Assessment, 2006

Tanzania Bureau of Standards – Air Quality – Vehicle Exhaust Emissions Limits, 2007

Tanzania Bureau of Standards – Drinking (Potable) Water, 2008

Tanzania Bureau of Standards – Municipal and Industrial Wastewaters: General Tolerance Limits for Municipal and Industrial Wastewaters, 2006

Tanzania Bureau of Standards – Protection against Ionizing Radiation – Limits for Occupational Exposure, 2007

Tanzania Bureau of Standards – Soil Quality, 2007

Tanzania Bureau of Standards – Water Quality Standards, 2009

Tanzania Environmental Management (Air Quality Standards) Regulations, 2007

Tanzania Road Sector (Environmental Protection) Regulations, 2009 - Tanzania

Tanzania Road Sector Environmental Assessment and Management Guidelines for Tanzania – 2011

Tanzania Road Sector Environmental Assessment and Management Guidelines for Tanzania – 2011

Uganda Environment Impact Assessment Regulations, 1998

Uganda Environmental Impact Assessment Guidelines for Road Projects, 2007

Uganda Environmental Impact Assessment Regulation, S.I. No. 13/1998

Uganda National Environment (Audit) Regulations, 2006

Uganda National Environment (Management of Ozone Depleting Substances and Products) Regulations 2001

Uganda National Environment (Minimum Standards for Management of Soil Quality) Regulations, 2001

Uganda National Environment (Noise Standards and Control) Regulations, 2003

Uganda National Environment (Standards for Discharge of Effluent into Water or on Land)

Regulations, S.I. No 5/1999

FINAL REPORT

ANNEX B 3

GUIDELINES AND MANUALS FOR ENVIRONMENTAL ASSESSMENT, MANAGEMENT AND STANDARDS FOR ROAD SECTOR

PREFACE

Although roads are economically and socially beneficial to the nation, it has been noted that poorly planned roads and bad construction practices have adverse effects to human health and the environment. Negative environmental and socio-economic impacts resulting from road sector development and management include: loss of biodiversity; land degradation; involuntary resettlement, unintended induced development; deforestation, pollution of air, water and soil; roads safety and human health. Because of the environmental and socio-economic impacts resulting from road sector development in East African Community (EAC), it was important to prepare detailed guidelines and manual specific on road sector. In addition, the preparation of these guidelines is in line with EAC Protocol on Environment and Natural Resources Management on Article 28: Management of Chemicals, Article 29: Management of Wastes and Hazardous Wastes, Article 30: Pollution Control and Management, Article 31: Environmental Impact Assessment and Audits and Article 32: Environmental Standards that require all member states to develop and harmonize common policies, laws and strategies relating to the best environmental protection and management practices.

Two levels of guidelines have been prepared, namely guidelines at the road project level where environmental assessment and activities to be followed during different phases of road projects have been described in details. In the second level of guidelines, consideration has been given to the road facility which is operational. At this level the road operator which for EAC is road authority in a member state, is supposed to follow the guidelines that are describing the general environmental management and protection of the road as a facility. However, for the road projects that will be of trans-boundary in nature, the Trans-boundary Environmental Assessment guidelines for shared ecosystems in East Africa (EA) as have been prepared by EA should apply.

The main objective of these guidelines should therefore be to provide an operational tool to incorporate environmental and socio-economic considerations into all phases of road development, including planning, feasibility, design, construction and operation and maintenance of roads in EAC. Hence, the guidelines explain the various steps in the environmental impact assessment (EIA) process, general environmental management and protection of road and environmental quality standards and clarify the roles and responsibilities of the key stakeholders.

It is envisaged that the guidelines will contribute to an increased awareness about EIA and general environmental management and protection in the road sector and to a road management practice that increasingly avoid negative impacts of road sector activities on natural and cultural environment and on human health of EAC. The users of these guidelines should include: project planners, designers, managers, site engineers and technicians from road implementing agencies, environmental assessment consultants, private consulting firms and contractors, the Ministry responsible for road sector in a member state and the National Environment Management body of a member state to mention but a few. Appendices to these guidelines should form an integral part of these guidelines.

Once again it is emphasized that without integrating environmental issues in the road management activities, we are bound to destroy a living environment in EAC thus suffer permanently.

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ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
BoQ	Bill of Quantities
C&R	Compensation and Resettlement
CRPs	Compensation and Resettlement Plans
DOE	Director of Environment
EA	East Africa
EAC	East African Community
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMC	Environmental Management Committee
EMP	Environmental Management Plan
GPS	Global Position System
HIA	Health Impact Assessment
HIV	Human Immunodeficiency Virus
NGOs	Non Governmental Organizations
PAP	Project-Affected People
RA	Risk Assessment
RSA	Road Safety Audit
SEA	strategic environmental assessment
SEU	Safety and Environment Unit
SIA	Social impact assessment
STIs	Sexually Transmitted Infections
TAC	Technical Advisory Committee
TAC	Technical Advisory Committee
ToR	Terms of References
UNCED	United Nations Conference on Environment and Development

1 INTRODUCTION

This chapter basically gives the background information, purpose of guidelines and contents.

1.1 General

Although roads are economically and socially beneficial to any nation, it has been noted that poorly planned roads and bad construction practices have adverse effects to human health and the environment. Negative environmental and socio-economic impacts resulting from road sector development and management include: loss of biodiversity; land degradation; involuntary resettlement, unintended induced development; deforestation, pollution of air, water and soil; road safety and human health. Because of the environmental and socio-economic impacts resulting from road sector development in East African Community (EAC), it was important to prepare detailed guidelines and manual specific on road sector. In addition, the preparation of these guidelines is in line with EAC Protocol on Environment and Natural Resources Management on Article 28: Management of Chemicals, Article 29: Management of Wastes and Hazardous Wastes, Article 30: Pollution Control and Management, Article 31: Environmental Impact Assessment and Audits and Article 32: Environmental Standards that require all member states to develop and harmonize common policies, laws and strategies relating to the best environmental protection and management practices.

1.2 Purpose of the Guidelines

The main purpose of these guidelines is to provide the road authorities in member states with an easy guidance to mainstream environmental assessment and management into road project cycle activities. In addition, it is hoped that the guidelines may serve as a useful resource on road sector environmental assessment and management for road planners and constructors as well as the relevant environmental authorities in member states and funding agencies hereby contributing to the continuous process of improving the environmental performance of the road sector in EAC.

In 2009 The Protocol on Environment and Natural Resources Management was signed by Three Member States, namely the United Republic of Tanzania, The Republic of Kenya and the Republic of Uganda. Under the provisions of subparagraph (a) of paragraph 1 of Article 38 of the Protocol on the Establishment of the East African Customs Union signed on 2nd March 2004, cognizance was taken of inter-linkages and co-operation between the Customs Union and environment and natural resources management. The Member States on 29th November 2003 signed the Protocol on the Sustainable Development of Lake Victoria Basin; on 30th June 1994 signed the Convention for the Establishment of the Lake Victoria Fisheries Organization. Moreover Chapters 19 and 20 of the Treaty provide for cooperation on environment and natural resources management.

The preparation of road sector environmental guidelines is in line with EAC Protocol on Environment and Natural Resources Management on Article 28: Management of Chemicals, Article 29: Management of Wastes and Hazardous Wastes, Article 30: Pollution Control and Management, Article 31: Environmental Impact Assessment and Audits and Article 32: Environmental Standards that require all member states to develop and harmonize common policies, laws and strategies relating to the best environmental management.

The guidelines are developed specifically for road sector activities. However the guidelines on environmental assessment of road projects may also in part or in whole be relevant for other line-shaped infrastructure activities, such as railways, pipelines, high voltage electrical power lines etc.

1.3 Contents

The appropriate timeline of environmental assessment and management activities in the road sector are correlated closely with the road project cycle activities. With the purpose of making the guidelines operational and logical to a road planner or a road engineer it was therefore decided to link the description of environmental assessment and management activities to the stages of the project cycle. Hence, the guidelines are broadly structured into three parts as explained here below:

Part One: Procedures For Environmental Assessment of Road Projects: This is the aspect at the road project level whereby the environmental assessment of the road projects should be done. It is chapter two of the manual in which the following topics are covered;

(a) Topic 1 presents a definition of Environmental Impact Assessment (EIA);
(b) Topic 2 contains purpose of EIA
(c) Topic 3 identifies the types of the Road Projects subject to Environmental Assessment
(d) Topic 4 describes the overall environmental assessment process;
(e) Topic 5 contains a guide to environmental actions required during the project planning and pre-feasibility phases, i.e. environmental registration of projects, scoping of the environmental impact assessment (EIA) study and preparation of Terms of Reference (ToR) for environmental experts;
(f) Topic 6 contains a guide to environmental actions to be taken during the feasibility and preliminary design phases of a road project, including the conduct of the EIA study and preparation of draft and final environmental impact statement (EIS) with environmental management plan (EMP), and obtaining EIA certificate;
(g) Topic 7 provides a guide on how environmental issues should be incorporated in the tendering and contracting process, and how measures to mitigate negative impacts of the road projects should be incorporated into the detailed design of the road;
(h) Topic 8 provides a guide on requirements for environmental supervision and monitoring during construction (site preparation, construction works, demolition of construction works);
(i) Topic 9 provides a guide to environmental management during operation of the road,
(j) Topic 10 provides environmental guidelines during decommissioning;
(k) Topic 11 deals with Guidelines for Socioeconomic and Cultural Impacts Assessments
(l) Topic 12 contains Compensation and Resettlement Guidelines.

Part Two: General Environmental Protection and Management: It is an aspect that the road is operating whereby the road facility is already in place and the road authority in a member state for operating the road (road operator) has to ensure that the road authority in a member state sticks to environmental management and protection. This is chapter three of the manual with the following topics:

(a) Soil Erosion Protection
(b) Vegetation Protection
(c) Liquid and Solid Waste Management
(d) Atmospheric Emission Protection/Management
(e) Air Pollution Control
(f) Noise Protection
(g) Lighting Management
(h) Historical Site Protection
(i) Management of Hazardous Substance
(j) Land Tenure Management

(k) Blasting and Explosive Management
(l) Accident and Transportation of Materials
(m) Compensation Arrangements
(n) Contractors Employees Protective Gears
(o) Environmental Management Issues into Contracts

Part Three is appendices which include environmental quality standards, submission forms, checklists, examples and templates. This aspect forms an integral part of the guidelines. The following appendices are part of these guidelines;

(a) Appendix 1 - List of Environmental Management Activities for Each Project Phase
(b) Appendix 2 - Environmental Registration and Project Brief Form;
(c) Appendix 3 - Checklist on Environmentally Sensitive Areas and Ecosystems;
(d) Appendix 4 - Template for Terms of Reference for an Environmental Expert
(e) Appendix 5 - Checklist for Identification of Environmental Impacts;
(f) Appendix 6 - Method of Determining the Intensity and Significance of Impacts;
(g) Appendix 7 - Example of a Summary Table for Description and Evaluation of Environmental Impacts;
(h) Appendix 8 - List of Issues to be covered in an Environmental Impact Statement (EIS);
(i) Appendix 9 - Example of an Environmental Management Plan (EMP);
(j) Appendix 10 - Example of a Summary Table of an Environmental Management Plan (EMP);
(k) Appendix 11 - Example of an Environmental Strip Map Presenting Impacts and Mitigation Measures;
(l) Appendix 12 - Environmental Impact Statement (EIS) Submission Form;
(m) Appendix 13 - EIA certificate forms; and
(n) Appendix 14 - Form for Application of Variation of EIA Certificate
(o) Appendix 15 - Checklist on Environmental Issues to be considered in the Design of the Road;
(p) Appendix 16 - Example of Environmental Contract Clauses for Use in Tender Documents and Contract Agreements
(q) Appendix 17 - Forms for Monitoring of Construction Works
(r) Appendix 18 - Checklist for Road Maintenance
(s) Appendix 19 - Checklist for Semi-annual reporting
(t) Appendix 20 - Air Quality Standards
(u) Appendix 21 - Water Quality Standards
(v) Appendix 22 - Noise Quality Standards
(w) Appendix 23 - Soil Quality Standards
(x) Appendix 24 - Standards for Discharge of Effluent/Wastewater Standards
(y) Appendix 25 - Vibration Standards
(z) Appendix 26 - Electromagnetic Waves Standards
(aa) Appendix 27: Methodologies for Socioeconomic Impacts Assessments
(bb) Appendix 28: Implementation Checklist for Compensation and Resettlement Plan
(cc) Appendix 29: Compensation and Resettlement Plan Reporting Format

2 Procedure for Environmental Assessment of Road Projects

2.1 What is Environmental Impact Assessment (EIA)

The United Nations Conference on Environment and Development (UNCED) in 1992 and Principle 17 of the Rio Declaration, and to which the Member States subscribe, states:

"Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority".

The terms 'impact assessment' and 'environmental impact assessment' are umbrella terms frequently used to cover a broad range of techniques, e.g. social impact assessment (SIA), risk assessment (RA), and health impact assessment (HIA). To date, EIA in East Africa has been applied generally at the project level, but increasing attention is now being given to its role at the level of policies, plans and programmes - when it is known as strategic environmental assessment (SEA).

2.2 Purpose of EIA

EIA is a process that can be used to improve decision-making and ensure that development options under consideration are environmentally, socially and economically sound and sustainable. It is concerned with identifying, predicting and evaluating the foreseeable impacts, both beneficial and adverse, of proposed development activities, alternatives and mitigating measures, and aims to eliminate or minimize negative impacts and optimize positive impacts.

2.3 Types of the Road Projects subject to Environmental Assessment

The following types of projects are subject to environmental assessment and should be registered prior to the commencement of any implementation.

(a) Road project types that are listed on the Environmental Assessment and Audit Regulations list of projects for which environmental impact assessment is mandatory;
(b) Any new road construction;
(c) Upgrading of a road;
(d) Rehabilitation of a road; and
(e) Any road project which requires opening of a new borrow pit, a new quarry or establishment of a temporary facility in a sensitive area.

2.4 The Environmental Assessment Process

2.4.1 Objectives and Functions

The function of the Environmental Impact Assessment (EIA) process in the road sector should be to identify the positive (beneficial) and negative (adverse) impacts of a proposed road project on the natural and human environment and then to formulate appropriate remedial/ mitigation measures to avoid or minimize adverse negative impacts and to enhance beneficial impacts.

The EIA process should help develop more environmentally friendly road projects by reducing negative environmental impacts through alternative approaches, design modifications, and remedial measures. The application of EIA to road construction, upgrading, improvements, rehabilitation, and maintenance and to transport operations is a preventive strategy.

2.4.1.1 Objectives and Key Factors in the Environmental Assessment Process

The objectives of an environmental assessment process for a road project should be to:

- Ensure environmentally sound and socially fair planning and implementation of the road project;
- Ensure that stakeholders/potentially affected people are informed about the project and that their viewpoints and concerns are considered in the planning and implementation of road project; and
- Reveal the environmental and socio-economic background for an informed decision-making regarding the project.

2.4.1.2 Functions of the Environmental Assessment Process

The functions of the environmental assessment process should be to:

- Clearly describe a project, including alternative project proposals;
- Identify potential environmental and socio-economic impacts;
- Propose mitigation measures to minimize adverse (negative) impacts and to enhance beneficial (positive) impacts;
- Improve and optimizing the project;
- Prepare environmental management plans which “translate” mitigation into an operational plan that can be implemented by the road authority and the contractor;
- Present to managers and decision-makers a clear assessment of potential impacts that a project (or a strategic level initiative) may have on environmental quality;
- Provide adequate information to the public and obtaining views from the public;
- Support authorities in making good decisions; and
- Apply to a project (or a strategic level initiative) methodology that assesses and predicts impacts and provides the means to prevent and mitigate impacts and to enhance benefits.

The environmental assessment process is not only a decision-making tool, but also provides a specific forum to systematically undertake public consultation in a manner that allows stakeholders to have direct input to the environmental management process.

For an environmental impact assessment to be effective and successful, the road authority in a member state should understand the assessment process and should coordinate the outcomes of the EIA study with road planning, design, contract preparation and tendering, construction, and operation and maintenance activities. This will allow sufficient lead-time and funds to be allocated, if needed. It is also essential that road authority staff in a member state know:

- How to recognize potential environmental concerns;
- When to call other specialists;
- How to specify mitigation measures; and
- How to implement mitigation plans and environmental contract clauses.

The process also entails preparing contract clauses on and developing work procedures in relation to roadside communities, flora and fauna, and unique or endangered species, and training staff in order to ensure environmentally, socially and socio-economically sound as well as fair road sector environmental management.

There should be close cooperation between supervising road engineer/technician and the environmental expert(s). Consultation is important with affected residents, interested members of the public, government departments, and other organizations, collectively known as the

stakeholders. The road authority staff in a member state involved in the consultation process should know how to address various institutional and cultural needs and differences.

2.4.2 Steps in the Environmental Assessment Process

Steps that should be followed to carry out the environmental assessment process for road projects in EAC member state should be as follows:

1. Registering project with the National Environmental body of a member state, i.e. applying for environmental permission;
2. Environmental screening of the project, i.e. determining whether environmental impact assessment (EIA) is required or not;
3. Scoping of the EIA study and preparation of Terms of Reference (ToR) for the environmental expert;
4. Conducting the EIA study and preparing the environmental impact statement (EIS);
5. Obtaining EIA certificate (environmental permission);
6. implementing the environmental management plan (EMP);
7. Monitoring (compliance monitoring) during construction;
8. Self-auditing (impact and effect monitoring); and
9. Control auditing by the National Environmental Management body of a member state

2.4.3 The Roles and Responsibilities of the Road Environmental Authority

The road authority in a member state should be responsible for planning, designing, constructing and operating roads. The road authority in a member state should also be responsible for environmental registration of road projects, conducting environmental impact assessments (EIAs), and implementing environmental management plans (EMPs) and compensation and resettlement action plans (CRPs). The road authority in a member state should also be responsible for environmental monitoring of its projects and for submission of environmental monitoring reports to its sector environmental unit.

The Minister responsible for the environment and the National Environment Management body of a member state should be the competent environmental authority for all road projects. The National Environment Management body of a member state should have the authority to approve or reject screenings, scoping reports, and environmental impact statements. The Minister responsible for the environment in a member state should have the authority to decline, grant or revoke EIA certificates (environmental permissions) based on approved environmental impact statements or, in cases where EIA is not required, on provision of sufficient project information in the project brief which were attached to the environmental registration form.

The road sector environmental unit in a member state should be responsible for supervising and guiding the road authority in a member state, and for liaison between the road environmental authorities.

2.4.4 Aligning Environmental Assessment Process with the Road Project Cycle

Road projects generally follow well feasibility studies, then preliminary design, detailed design, contract preparation and tendering, and construction, and finally, operation and maintenance. For some projects, consulting with various government agencies and the public may be an essential component during several stages. Figure 1 shows different phases of the road project.

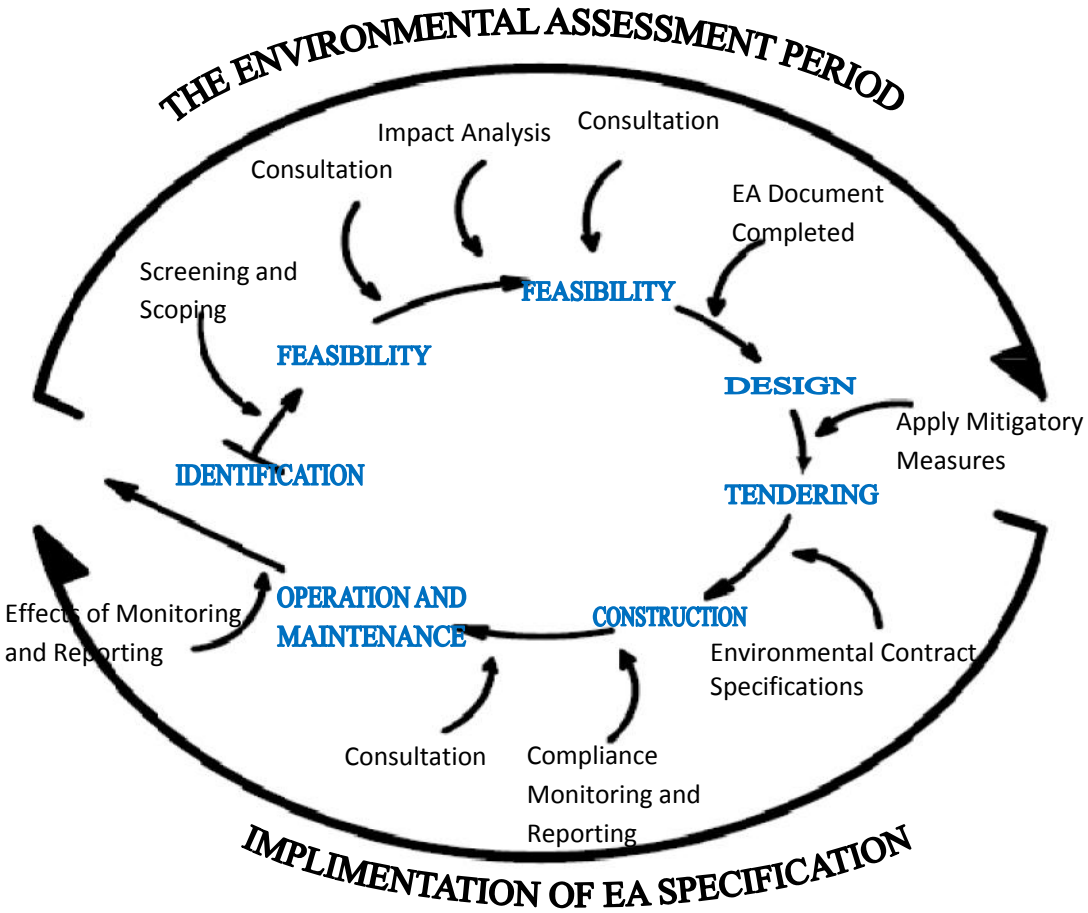


Figure1 Different Phases of Road Project

In order not to create bottlenecks in the planning process, it is important to synchronize environmental assessment process with the project development process. Ideally, the EIA and project development process should be conducted in tandem. The environmental impact statement (EIS) should be completed by the end of the feasibility stage of the engineering work and the implementation of the environmental management plan (EMP) should be linked to the design, contract preparation and tendering, construction, and operational phases. That means environmental assessment should be considered and budgeted from the very beginning of a road development project. The ideal synchronizing of the EIA with the road project cycle appear from Figure 1.

The benefit of an early registration is that the road authority will obtain possible concerns of the environmental authorities at an early planning stage whereby environmental concerns will be easier and cheaper to address in the project. The summary of environmental activities for different phases of the road project is in Appendix 1.

2.5 Project Planning and Pre-feasibility Phases

The following environmental actions should be required in the planning and pre-feasibility phases of a road project:

(a) Environmental registration of the project with the National Environment Management body of a member state;
(b) Environmental screening of the project by the National Environment Management body of a member state; and
(c) Scoping of the environmental impact assessment (EIA) study, including preparation of Terms of Reference for the environmental consultants

In certain cases the preliminary environmental impact assessment may be required to be carried out if the available environmental information is insufficient to allow for a determination of EIA requirement.

2.5.1 Environmental Registration and Project Brief

The project proponent, usually the road authority in a member state, should submit a registration form with a project brief to the National Environment Management body of a member state. The registration form (sample registration and project brief form is in appendix 2) serves as an application for an EIA certificate (or an environmental permission) for the project. The registration should preferably take place during the planning phase in order to make sure that the environmental assessment process will not delay the execution of the road project. A brief of the project must be included in the registration form.

Hard/paper copies and one electronic copy of the registration and project brief form must be submitted to the National Environment Management body of a member state. The number of copies to be submitted will be case by case depending on a member state discretion. In addition, a paper copy and one electronic copy of the registration and project brief form should be submitted to the Ministry responsible for road sector in a member state, in the department dealing with the environment.

The registration and project brief form must be submitted to the National Environment Management body of a member state; together with the prescribed registration fee.

2.5.1.1 Which Projects must be registered?

Not all road projects must be registered. Road projects must be environmentally registered if they are listed as follows:
First Schedule3, i.e.:

(a) List A (mandatory list) - 'Construction, expansion or rehabilitation of new trunk roads';
(b) List A (mandatory list) - 'Construction or expansion/upgrading of roads,
(c) List B (non-mandatory list) - 'Rural road'.

List A, the so-called mandatory list, is a list of project types for which EIA is mandatory. List B, the so-called non-mandatory list, is a list of project types where EIA may or may not be required depending on the scale of its expected environmental and social impacts. Table 1 gives an overview of which projects must be registered, and which projects do need environmental registration.

Table1: List of Projects for Environmental Assessment

Types of road sector projects that are subject to environmental assessment and must be registered	**Types of road sector projects that are NOT subject to environmental Registration.**
New road constructions, i.e. new roads, bypasses and realignment of existing roads	**Periodic maintenance*)**, e.g. resurfacing, lane marking, and bridge maintenance
Upgrading, i.e. adding new lanes and changing of road surfaces, widening lanes and shoulders, adding extra lanes in steep slopes/inclines, improving curves, and strengthening bridges	**Routine maintenance*)**, e.g. patching of potholes, clearing of drains and ditches, and clearance of roadside vegetation
Rehabilitation, i.e. improving drainage, slopes, embankments and other structures, strengthening of pavements, complete resurfacing and recuperating civil works	
Maintenance that requires either opening of new borrow pits or quarries, or establishment of labor camps in an environmentally sensitive area.	

The checklist for determination of sensitive areas is in appendix 3.

2.5.1.2 Environmental Registration Form

A sample of an environmental registration form is in appendix 2.

2.5.1.3 Project Brief

Submission of an environmental registration form should be accompanied by a project brief. The project brief is not meant to be a huge document describing the project and its environmental and social characteristics and implications in detail. On the other hand it should contain information sufficient for the environmental authority to determine whether an EIA is required or not for the project.

The required information in the project brief should be as follows:

(a) Nature of the project;
(b) Location of the project, including the physical area that may be affected by the project activities;
(c) Activities that will be undertaken during the project construction, operation and decommissioning phases;
(d) Design of the project
(e) Materials to be used, products and by-products, waste generation and methods of waste disposal;
(f) Alternatives to be considered, at a minimum the do-nothing alternative;
(g) The potential environmental impacts of the projects based on available information;
(h) Mitigation measures considered during construction, operation and decommissioning;
(i) An action plan for prevention and management of possible spills and accidents during construction, operation and decommissioning;
(j) A plan to ensure the health and safety of workers and neighboring communities;
(k) A project budget estimate;

(l) Any other information which the National Environmental Management body of member state may require.

2.5.1.4 Submission of Registration and Project Brief Form

The road authority in a member state should submit copies and one electronic copy of the registration and project brief form to the National Environment Management body of a member state together with the prescribed fees. One hard copy and one electronic copy should be submitted to the Ministry responsible for road sector of a member state in the department dealing with the environment.

2.5.2 Environmental Screening

Upon receipt of environmental registration with a satisfactory project brief, the National Environment Management body of a member state should screen the project to determine whether an environmental impact assessment (EIA) is required or not. Between 21 - 45 days of receipt of a satisfactory project brief, the National Environment Management body of a member state should respond to the road authority with its decision, including a justification for its decision. The result of the environmental screening should be one of the following:

(a) EIA is required because the project is likely to cause significant socioeconomic or environmental impacts. In this case the road authority of a member state may go on to determine the scope of the EIA study and prepare Terms of Reference for the environmental expert to be approved by the National Environment Management body of a member state;
(b) Preliminary EIA is required because it cannot be determined whether the project may cause significant socio-economic or environmental impacts until further information is generated. In this case the road authority of a member state may facilitate that the required information is generated in accordance with the requirements of the National Environment Management body of a member state, i.e. carry out a preliminary EIA addressing the uncertain issues identified by the National Environment Management body of a member state. If the road authority finds it likely that a preliminary environmental assessment should reveal a need for an EIA, it may opt to go ahead with the EIA directly; or
(c) EIA is not required because the project is unlikely to cause significant socioeconomic or environmental impacts. In this case the Minister responsible for the environment should issue an EIA certificate based on the information provided in the project brief. Alternatively the National Environment Management body of a member state should issue a no objection letter.

If the National Environment Management body of a member state deems the provided project brief unsatisfactory, the National Environment Management body of a member state should request the road authority for additional information, before an environmental screening of the proposed project can take place. The National Environment Management body of a member state may decide to involve its Technical Advisory Committee (TAC) in the screening process.

2.5.3 Scoping of the EIA Study

After environmental registration and prior to the feasibility study, the EIA study should be scoped. The road authority of a member state should conduct the scoping study. The purpose of the scoping study is to determine the approach and methodology of the study, the extent and the focus areas of the study. In addition, Terms of Reference (ToR) for the environmental expert who will undertake the EIA study be prepared.

The scoping study and the ToR should be prepared by the road authority in a member state and submitted to the National Environment Management body of the member state for approval. The accuracy and results of the scoping process depends on the project description, so it is important that the project description be as detailed as possible.

2.5.3.1 Steps in the Scoping Process

The scoping process should include the following steps:

(a) Identifying and describing project alternatives;
(b) Identifying the study parameters, including environmental and socioeconomic issues of concern;
(c) Determining the study area;
(d) Conducting preliminary consultation with interested and affected people and developing the consultation methodology for the EIA study;
(e) Reviewing and revising the study area and scope of the study based on consultations, as required;
(f) Preparing ToR for the study;
(g) Preparing a time plan for the study;
(h) Identifying the skills and human resources needed to undertake the study;
(i) Drafting the report attached with draft ToR for the study and submitting it for review to ;
(j) Possibly revising the draft scoping report based on inputs from the National Environmental Management body of a member state and resubmit for final approval

2.5.3.2 Identifying and Describing Project Alternatives

The EIA study should always include at least two alternatives, i.e. the main project proposal (often referred to as Alternative 1) and the situation of not implementing the proposed road project (often referred to as the zero-alternative). In addition, other alternatives may be assessed in the EIA study, as applicable. For road projects this would most often be in terms of alternative alignments, but it could in principle also be in terms of alternative technologies, such as bridge types, surfacing, slope stabilization etc.

The scoping report should identify the alternatives to be included in the EIA study, and provide a description of each alternative.

2.5.3.3 Identifying the Study Parameters

The first step should be to compile a preliminary list of the most critical environmental components and to identify how and to what extent the proposed design options would affect each component. A matrix for rapid impact evaluation may be a helpful tool to get a quick overview of the significance of possible environmental or socio-economic impacts. Application of the matrix should facilitate a systematic approach and make sure that no areas of significance are forgotten in the process. It will also be useful in the focusing and scoping of the EIA study. The standardized matrix presented in Table 2 may be revised to fit the specific project, as appropriate

Table 2: Standardized Matrix for Rapid Impact Evaluation

	BIO-GEO-PHYSICAL ENVIRONMENT														SOCIO-ECONOMIC ENVIRONMENT															
	Air			Soil			Water			Biology					Planning framework						Economic environment						Quality of life			
PROJECT COMPONENT	Climate	Air quality	Noise and vibrations	Geology	Erosion and sedimentation	Soil quality	Hydrology /hydrogeology	Surface water quality	Ground water quality	Terrestrial ecosystems	Aquatic ecosystems	Flora	Fauna	Endangered/indigenous species	Land use planning	Conservation areas	National parks	Forest reserves	Historical/ Cultural religious heritage	Landscape and aesthetic values	Infrastructure facilities	Industries	Mines	Agricultural and forestry activities	Fisheries	Tourism	Affected people and settlements	Public health	Road safety	Recreational values
Alternative 1																														
- Construction phase																														
- Operation phase																														
Alternative 2																														
- Construction phase																														
- Operation phase																														
Alternative 3																														
- Construction phase																														
- Operation phase																														
Zero alternative																														
- Construction phase																														
- Operation phase																														

NOTE: USE OF THE MATRIX FOR RAPID IMPACT ASSESSMENT:
a) Numerical value of **3** means MAJOR IMPACT, **2** INTERMEDIATE and **1** MINOR impact.
b) Numbers with NEGATIVE SIGN represent NEGATIVE impacts.
c) Numbers with POSITIVE SIGN represent POSITIVE impacts.

d) Numbers in PLUS and MINUS SIGNS represent combination of POSITIVE and NEGATIVE impacts.

2.5.3.4 Determining the Study Area

The study area usually includes: The road alignment with a corridor of 300 - 500 m to each side of the road for all included alternatives, sensitive developments and areas in the vicinity of the road, locations for accessory activities (borrow pits, quarries, equipment storage, work sites for asphalt mixing, equipment storage areas, labour camps, and temporary roads), protected areas and sensitive developments in the area, and areas that may be indirectly impacted.

The spatial limits of the study usually comprise of the geographic area or area of influence subject to potential environmental impact by the project. The spatial limit usually includes:

(a) The road alignment with a corridor of 300 – 500 m to each side of the road;
(b) Sensitive areas and ecosystems which may be affected by the road development;
(c) Areas of value for vulnerable or affected people;
(d) Locations with construction activities, e.g., quarries, borrow pits, dumps, diversions, work camps (e.g., asphalt mixing areas and equipment storage areas), and labour camps;
(e) Possible alternative alignments; and
(f) Areas indirectly affected.

Sometimes the spatial boundaries of the study area are the same as that of the feasibility study. Sometimes the study area may be enlarged if environmental impacts are likely to affect areas beyond the immediate physical surroundings (e.g., downstream of a major river crossing). Special consideration should be given to:

(a) Water catchment areas;
(b) Prime agricultural land;
(c) Coastal and marine ecosystems
(d) Wetlands, mangroves and swamps;
(e) Declared nature protection areas (national parks, watershed reserves, forest reserves, wildlife reserves and sanctuaries, sacred areas, wildlife corridors and hot-spring areas); and
(f) Areas important to threatened cultural groups.

2.5.3.5 Conducting Preliminary Consultations

The road authority in a member state should conduct preliminary consultations of potentially affected people in connection with the scoping process. The preliminary consultations serve three purposes:

- Identifying key social and environmental issues based on a consultative process;
- Identifying the most appropriate methodology for public consultation; and
- Informing local people/groups about the proposed road project.

Therefore, the preliminary consultations should:

- Identify local groups (e.g., local government, NGOs, and CBOs);
- Identify key issues to be included in the study based on preliminary consultations (e.g., geology, natural resources, and cultural practices);
- Outline the consultation process for EIA study.

This local baseline information should be collected during the scoping phase. The scoping report should clearly identify which environmental and social issues are identified as critical and exactly how the public will be involved during the EIA study.

Consulting affected groups and stakeholders facilitates data collection, problem resolution, and successful implementation and operation of the road project. Involving local people is likely to result in a more sustainable project, as local people may develop a sense of project ownership and may commit to maintaining the road.

2.5.3.6 Preparing a Time Plan and a Budget for the Study

A realistic time plan and budget for execution of the EIA study should be included in the scoping report. The study should focus its time and resources on the areas where potential impacts are likely to occur and on the issues that are critical to the project. It is important to consider time constraints and the financial budget at the beginning of the project (at planning/pre-feasibility phase) to avoid delays in conducting the EIA, and to ensure the effectiveness of the procedures.

The following issues should be considered when estimating the time and budget for an EIA study:

(a) Availability of information from existing database to minimize the need for field study;
(b) Seasonal aspects of the project area;
(c) The availability of in-house expertise; and
(d) Possibility of carrying out the EIA study in parallel with technical and economic feasibility studies.

2.5.3.7 Preparing Scoping Report for the EIA Study

The road authority in a member state should prepare and submit the scoping report to the National Environmental Management body of a member state for approval. The scoping study report should address the following issues:

(a) How the scoping was undertaken;
(b) Identification of issues and problems;
(c) Synthesis of results of the scoping exercise, including details of potential negative and positive impacts of the proposed project;
(d) Stakeholder groups identified and how they were involved in the scoping exercise;
(e) Spatial, temporal and institutional boundaries of the project
(f) Project alternatives to be considered. At a minimum the do-nothing alternative must be included, i.e. the situation of not implementing the proposed project;
(g) Terms of Reference for the environmental expert(s), including approach and methodology of the EIA study, scope and focus areas.

2.5.3.8 Submission of Draft Scoping Report and Draft ToR for Approval

The road authority in member state should submit one hard copy and one electronic copy of the draft scoping report and the draft Terms of Reference for the environmental expert to the National Environmental Management body of a member state for approval.

2.5.4 Terms of Reference for the Environmental Expert

2.5.4.1 Preparation of Terms of Reference (ToR)

As part of the scoping exercise, Terms of Reference (ToR) for the environmental expert should be prepared and attached to the scoping report. Sample Terms of Reference for an EIA study is in appendix 4.

2.5.4.2 Identifying the Skills and Human Resources needed to undertake the EIA Study

Depending on the size of the project and the nature of the foreseen environmental impacts the EIA study should be carried out by a team of experts, including two or more of the following fields of expertise:

(a) Biologist/geographer/environmental scientist
(b) Sociologist/socio-economist
(c) Geologist/hydro-geologist/hydrologist
(d) Marine ecologist/coastal zone specialist (for coastal or marine projects)
(e) Traffic planner
(f) Noise and vibrations specialist
(g) Air quality and climate
(h) Urban planner/ land use planner
(i) Environmental engineer
(j) Economist/ environmental economist.

It is less likely that one environmental expert will be able to cover all relevant aspects of an EIA study at a professional level. Therefore the road authority in a member state should make sure that all required fields of expertise are covered by the EIA study team. With respect to proposals for and description of mitigation measures, it is of utmost importance that the team of environmental experts works closely with the road engineers in order to ensure that the proposed measures are technically acceptable and implementable.

2.5.4.3 Procurement of Services of the Environmental Expert

If the project is funded by Government, the road authority in a member state should follow the public procurement rules for the procurement of services of the environmental expert for that particular country. Depending on the scale of project, the usual procedure should be to invite three to five environmental experts/firms to submit proposals.

The EIA study should be undertaken by an independent environmental consultant or expert who has registered as an environmental expert with National Environmental Management body of a member state. The National Environmental Management body of a member state may provide the road authority with an updated list of registered environmental experts. The criteria for selecting a consultant should be based on:

(a) The firm's EA experience;
(b) Adequacy of the proposed work plan;
(c) Understanding of the project with respect to the ToR and effective management of work; and
(d) Qualification of the personnel:
  - education;
  - training and experience;
  - sustainability to perform the duties
  - language skills;
  - successful EA experience from similar situations;
  - experience in the country and, particularly, experience in the region/locality

2.5.5 Preliminary Environmental Impact Assessment

If a project type is on list B (the non-mandatory list) EIA may or may not be required. In order to determine whether an EIA is required a preliminary environmental impact assessment should be

undertaken. If the project is likely to cause significant environmental and/or social impacts, an EIA will be required. If the preliminary assessment reveals that the project is not likely to cause significant impacts, an EIA will not be required.

If the road authority in a member state is uncertain whether an EIA will be required or not, it may in consultation with the National Environment Management body of a member state decide to opt for a voluntary EIA in order to save the time and resources it will cost to undertake a preliminary environmental impact assessment.

2.6 Feasibility Study and Preliminary Design Phases

The environmental impact assessment (EIA) study is usually carried out concurrently with the feasibility study of the project with the aim of submitting a draft environmental impact statement (EIS) at the end of the feasibility study period, and getting it reviewed and approved, and obtaining the EIA certificate for the project by the end of the preliminary design phase. On behalf of the road authority in a member state, an independent environmental expert/firm should carry out the EIA study and prepare the EIS. The road authority in a member state should be responsible for submission of the report to the National Environmental Management body of a member state.

Based on the outcome of the draft EIS, the National Environmental Management body of a member state should decide whether a public hearing is necessary. If required, the National Environmental Management body of a member state should conduct the public hearing. Based on comments and inputs from the review (and the public hearing), the environmental expert should finalize the EIS. Upon approval of the EIS, the Minister responsible for the environment should make his environmental permit decision, i.e. permit the project and issue an EIA certificate or decline to permit the project.

2.6.1 The EIA Study

The typical activities of an EIA study should include:

(a) Project context and project justification;
(b) Project description;
(c) Policy, Legal and Planning Framework
(d) Description of alternatives;
(e) Baseline study to reveal existing environmental conditions in the study area, including field investigations;
(f) Identification and analysis of impacts;
(g) Analysis and comparison of alternatives;
(h) Proposing mitigation measures and assessing residual impacts;
(i) Preparing an environmental management plan (EMP) with mitigation plans for detailed design, construction and operation of the road, emergency plan and monitoring plan; and
(j) Preparing the environmental impact statement (EIS).

2.6.1.1 Project Context and Justification

The first step in the EIA study should be to explain the overall project context and present the justification of the project. This presentation should be presented in the introduction to the EIA study.

Information pack needed to explain the context and justification of the project:

(a) Current condition of the project road: history of the road, daily traffic (e.g., composition, origin and destination, and duration of the travel), level of service, geometry and structural state of the road network, and road safety aspects (e.g., history, location, type of accidents, and factors causing accidents);
(b) Problems to solve and the need for the project;
(c) Objectives related to the project;
(d) Advantages and disadvantages of the project in relation to the problems, requirements, and objectives;
(e) Interests and main preoccupations of the diverse parties involved;
(f) Main ecological constraints;
(g) Impacts of the proposed project on the traffic on the adjacent road network and on the development of the region;
(h) Technical and economic requirements to implement and operate the project (e.g., importance of the project and the schedule of realization based on the existing plans and programs);
(i) Policies and orientations of the Government regarding land management (e.g., those included in the regional transport plans and the district and urban plans), environment, management of natural resources, energy, tourism, and public security;
(j) Opinion and approval of the local communities.

2.6.1.2 Project Description

The EIA study should include a clear project description and sufficient information to be able to identify and analyze impacts. The project description should at a minimum include:

(a) Title of the project;
(b) Type of project;
(c) Objectives and justification for the project;
(d) Location of the project, land ownership details, and reasons for choosing the site(s) (include a map of the location);
(e) A list of the technology to be used and all inputs and outputs;
(f) A list the project activities and the time schedule

This section of the EIS should describe the project, its context and the justification. This section also presents the alternatives considered and the conclusion of the analysis of alternatives. All projects in the area, which could influence the design or the potential impacts of the proposed project, should also be presented, highlighting the potential interactions and their cumulative effects.

2.6.1.3 Policy, Legal and Planning Framework

This section should make reference to relevant policies, pieces of legislation, and international conventions governing EIA requirements, including environmental quality standards relevant to the project. The implications for the road project in concern should be reviewed and explained.

The institutional framework for implementing the recommendations of the EIS should be outlined, including the division of roles and responsibilities between the various stakeholders (road authority, contractor and others) and the institutional requirements for implementation.

2.6.1.4 Baseline Study

The aim of the baseline study should be to provide a description of the current bio-physical and socio-economic environment and establish a set of references with which the impacts of the road

project can be compared. The approach and methodology for the baseline study must be described in the environmental impact statement (EIS).

The baseline study for a road project should typically address the following issues:

(a) Climate;
(b) Ambient air quality;
(c) Ambient noise;
(d) Current traffic statistics and projections for future traffic;
(e) Traffic accident statistics[5]
(f) Land use;
(g) Soils and erosion potentials;
(h) Geology;
(i) Groundwater;
(j) Surface waters;
(k) Landscape;
(l) Nature, flora and fauna;
(m) Cultural, historical and religious heritage;
(n) Urban and residential areas;
(o) Social and socio-economic features; and
(p) Tourism

Data Collection and Field Investigations

Site inspection should be conducted to document the existing conditions along the alignment and to note the environmental sensitivity of the area. Preparing for a site visit involves:

(a) Consulting those who have been to the site and know the area;
(b) Assembling required documents and information, such as maps, aerial photos, plans, elevation, and relevant information about the natural, social and human environment;
(c) Assembling required equipment such as camera, compass or GPS, and binoculars);
(d) Collecting baseline data from various sources. This should include:
    – Environmental studies and programmes relevant to the region, if any;
    – Information on relevant environmental requirements, including regulations, guidelines, and the requirements of the relevant lending agency, if the project is donor-funded (e.g. the World Bank or Danida);
    – Information on related government programmes, e.g. the development strategy for the region and any other ongoing development programmes conducted by development agencies or NGOs);
    – Reference materials, including the reports of relevant projects operating in the zone of influence;
    – A list of stakeholders to be consulted.

The site-visit and consultation team should include the following personnel:
The environmental expert representing the road authority;

(a) The regional or district engineer of the area where the project is located;
(b) Environmental specialists from the Ministry responsible for road and the road authority of a member state;
(c) A representative from the district/municipal Environmental Management Committee (EMC).

The site visit data should be recorded in an appropriate manner (on a map, if possible) and important features should be photographed. Appendix 5 provides a checklist of questions to

consider during the site visit. Good record keeping becomes critical at this stage. A project file should be opened and all relevant data should be kept in an easily accessible form.

Public Consultations

Consultations should be carried out with regional, district and local authorities, local communities as well as other interested parties. Local people should be involved during the site visit because they have important knowledge about local conditions, which will assist in the process of identifying impacts, determining causes, and developing appropriate mitigation measures.

Involving local people in project planning, design, and construction should also encourage them to participate in road operation and maintenance and in protecting the road structure.

The community-level consultation may be performed through public meetings, and the following issues may be discussed:

(a) Informing the community representatives about the project proposal and its justification;
(b) Explaining the EIA process for the project, including how concerns and suggestions of the public will feed inputs into the EIA study;
(c) Explaining the major environmental and socio-economic issues concerned with the road project;
(d) Inviting communities to provide their concerns, comments, and suggestions on the project and on how to enhance positive impacts and reduce or avoid negative environmental and socio-economic impacts;
(e) Wrapping up the discussions, and informing the community representatives about the way forward, including when they may expect to hear about the outcome of the EIA study, when they may expect the project to be implemented, and whom they may contact, if the need to follow up on the progress.

Describing the Baseline Conditions

The EIS should describe the state of the environment in the study area(s) before the construction of the project. The report, supported by quantitative and qualitative data, should describe the natural, social, and human environment susceptible to be affected by the project. If the data is not available from government offices, city councils, or other organizations or if the available data is not representative, the road authority should carry out field surveys to collect relevant data. The information should be summarized on maps to facilitate the understanding of the environmental context and the analysis of environmental impacts. The scale of the maps at this stage should be at 1: 10 000.

To the extent possible, the description of the natural environment must present the relationships and interactions between the different components of the environment so that ecosystems with high potential or of specific interest can be located. For example, the presence and abundance of animal species and relevant aspects of their life cycle (i.e., migration, reproduction, and food supply habits) should be highlighted. The inventories must reflect the social, cultural, and economic values assigned to the described component.

The description of the human environment should highlight land use planning efforts and existing projects from the study area(s). Cultural heritage should be described in such a way as to facilitate understanding of local communities, their use of different components of the environment, and their views on the project. The EIS should present and interpret this information, including the methodology used, the dates of the inventories, and the location of the sample stations.

2.6.1.5 Identification and Analysis of Impacts

The approach and methodology for identification and analysis of impacts should be described in the EIA study. The methods and techniques should be objective, concrete, and reproducible. The reader must easily understand the logic of how impacts were identified and assessed.

Potential impacts on the natural, socio-economic and human environment should be assessed for the construction phase as well as the operation phase of the road project. If demolition of the road is a realistic option, impacts of the demolition or decommissioning of the road should also be included. The impacts on the following should be identified and analyzed:

(a) Traffic;
(b) Consumption of energy and raw materials
(c) Land use;
(d) Soils and erosion;
(e) Geology;
(f) Groundwater;
(g) Surface waters such as rivers, water courses, lakes, reservoirs, wetlands, swamps, estuaries and marine areas;
(h) Landscape;
(i) Nature, flora and fauna;
(j) Cultural, historical and religious heritage;
(k) Climate;
(l) Air quality;
(m) Noise and vibrations;
(n) Solid and liquid wastes;
(o) Road safety6;
(p) Urban and residential areas;
(q) Social and socio-economic features; and
(r) Tourism

Identifying Impacts

Identifying impacts is often based on previous experience in similar projects; the assessment is usually based on a value judgment. Although the assessment cannot establish threshold limits or levels of acceptability, it should determine the criteria for impact mitigation and the need for follow-up and monitoring.

Assessing Impacts

The assessment of an impact should consider whether the impacts that are positive, negative, direct, indirect, (and as appropriate) cumulative, synergistic, reversible, and irreversible. The impact significance may be established by using the method presented in Appendix 6. Whenever possible, impacts should be described in quantitative terms, and the geographical location(s) and the likely time or conditions for occurring should be stated.

Impact significance depends on the intrinsic value of the affected ecosystem component(s) (i.e., sensitivity, uniqueness, rareness, and reversibility) and also on the social, cultural, economic, and aesthetic values attributed to the component(s) by the population. The more the population values a component in an ecosystem, the more likely the impact on this component will be considered important. The level of preoccupation of the population on health and security issues or on the protection of their archaeological sites also influences the assessment. The significance of the

impact also depends on whether the affected environmental component(s) have already undergone modifications.

In general, impacts that affect a large area and that are frequent, durable, or intense are viewed as more important. It is important to assess impacts at the level of the study area, the region, the zone, and the country. Appendix 7 gives an example for the presentation a summary of impacts description and evaluation for each project phase and activity. It tabulates the number of impacts, their location, and ranks impacts in terms of intensity, magnitude duration/ frequency, significance. It also lists specific measures to protect the environment and the level of residual impact.

2.6.1.6 Description and Analysis of Alternatives

The EIA study should include a description of alternatives to the main project proposal. As a minimum the so-called zero alternative should be included, that is the alternative of not implementing the proposed project. In addition other project options may be included as alternatives in the EIA study, such as alternative alignments, alternative sources of raw materials, or alternative technologies. The alternatives to be included in the EIA study appear from the scoping report.

During the course of the EIA study, the environmental expert and/or the road authority in a member state may identify additional alternatives which may have added socioeconomic benefits or reduced negative impacts. Such alternatives may be included in the EIA study.

Comparing Alternatives

The main purpose of comparing environmental impacts of the project alternatives is to provide the decision makers with the complete environmental and socioeconomic background information to be able to make an informed decision on what project alternative to proceed with. The selection of project alternative will be made based on both the feasibility study and the EIA study.

An impact evaluation matrix may be used to present the comparison of the environmental impacts of the project alternatives.

In some cases, one alternative has obviously more advantages and less negative impacts, and an environmental ranking of the project alternatives is easy. In many cases, however, the analysis of alternatives may involve comparing impacts that are not easily quantifiable (i.e., that are not measured using the same criteria) and that vary in time and space. In such cases it may not be possible to make an objective and scientifically verifiable environmental ranking of the project alternatives. For instance, what should weigh most – a religious monument or a pristine forest? That will always to some extent depend on the individual interests of the evaluator.

2.6.1.7 Mitigation Measures and Residual Impacts

Mitigation of Impacts

Impact mitigation aims to better integrate the project with the environment. Measures or actions to avoid minimize or reduce negative environmental and socioeconomic impacts should be proposed. Measures to improve or enhance beneficial environmental and socio-economic impacts should likewise be proposed. Proposed mitigation measures should be related to the relevant project phase, i.e.:

a) Mitigation measures to be incorporated into the detailed design of the road project;

b) Mitigation during construction phase:

- a. Pre-construction and site preparation activities,
- b. Construction works, and

- c. Demobilization of construction works and hand over of site

c) Operation and maintenance phase.

Presentation of Mitigation Measures and Residual Impacts

The mitigation measures should be described technically and in quantitative terms. In addition, an environmental strip map describing the impacts and the required mitigation measures must be produced. The map must be of the same scale as that of the feasibility study.

There will inevitable persisting negative environmental and/or socio-economic impacts of a road project after application of mitigation measures. Such impacts must be managed during the lifetime of the project in order to keep the impacts at acceptable levels and to comply with environmental standards and requirements. The environmental management plan (see section 2.6.1.8) will specify actions and responsibilities in the management of the residual impacts during construction and operation of the road.

2.6.1.8 Environmental Management Plan (EMP)

An environmental management plan (EMP) should be included as part of the environmental impact statement (EIS). The EMP is an operational plan for implementation of measures to mitigate negative environmental and socio-economic impacts during construction and operation of the road project and measures to enhance beneficial impacts of the projects. The EMP also includes an emergency plan and an environmental monitoring plan for the project.

The EMP plays a vital role in “translating” the findings and recommendations of the EIS into an operational plan that can be implemented by the contractor and the road operator. Detailed guidelines for the EMP are provided in Section 2.6.2.

2.6.1.9 Preparation of Environmental Impact Statement (EIS)

The findings and recommendations of the EIA study should be presented in an environmental impact statement (EIS). The EIS should contain the following:

(a) Cover page;
(b) Acknowledgements
(c) Executive summary (non-technical);
(d) Table of contents;
(e) Acronyms and abbreviations
(f) Introduction (background and project justification);
(g) Policy, legal and administrative framework;
(h) Project description;
(i) Bio-physical and socio-economic environment (baseline conditions);
(j) Identification and analysis of impacts;
(k) Analysis of alternatives;
(l) Mitigation measures and residual impacts for the selected alternative;
(m) Environmental management plan (EMP);
(n) Emergency plan;
(o) Environmental monitoring plan;
(p) Conclusions and recommendations;
(q) A list of references/bibliography; and
(r) Appendices.

The EIS must only include pertinent elements for the good comprehension of the project and its impacts. The information in the report must be presented clearly and concisely. To the extent possible, the information should be schematized or mapped and presented at the appropriate scale. The methods and the criteria used and the reliability, precision, and limits to the data and its interpretation must be explained.

For the environmental description, the report should list the elements used to assess quality (e.g., location of the sampling stations, date of inventory, methods used, and limitations). The reference list should mention all information sources. The name, profession, and function of the EIA team members must be indicated.

Information contributing to the comprehension or interpretation of data (e.g., the methodology for preparing the inventory) should be presented in a separate section of the report. To the extent possible, information (quantitative and qualitative) must be analyzed, summarized, and presented in summary tables. Appendix 8 presents a more detailed list of issues to be covered in an EIS.

2.6.2 Environmental Management Plan (EMP)

The road authority in a member state should prepare an environmental management plan (EMP) for any road project, irrespective of whether an EIA has been carried out or not. In case an EIA was carried out, to ensure that mitigation measures proposed in the EIS are implemented satisfactorily and timely.

The environmental management plan (EMP) captures the critical project-specific issues to be managed and ensures that commitments made during the planning phase are incorporated into the design, construction and operational phases of the project. The EMP presents the implementation responsibilities during the construction and operation phases

The EMP is prepared using the following information:

(a) The findings and recommendations of the EIA study;
(b) Relevant environmental standards;
(c) Other relevant pieces of legislation;
(d) Other government agency input; and
(e) Outcomes of community consultation.

An EMP should contain the following elements:

(a) An implementation plan for management of environmental and social impacts of the project, including:
    a. Mitigation measures to be incorporated into the detailed design,
    b. Construction phase activities,
    c. Operation phase activities;
(b) An emergency plan for accidents and spills, covering:
    a. Construction phase,
    b. Operation phase;
(c) An environmental monitoring plan, covering:
    a. Construction phase,
    b. Operation phase;
(d) Reporting requirements by:
    a. Road authority,
    b. Contractor;
(e) Cost estimates and funding sources to implement the EMP; and

(f) Construction guidelines that specifically address how the contractor will incorporate environmental considerations into the works.

The EMP need not be a lengthy document, but its contents must be specific, measurable, accurate, realistic and time-bound (SMART) and provide the road authority, the contractor and other involved stakeholders with precise and exact instructions regarding what should be done, where and when in order to safeguard the environment.

An EMP is sometimes referred to as an environmental and social impact management plan. Irrespective of the title of the plan it should address environmental as well as social impacts of a road project. Appendix 9 contains a proposed format for an EMP.

2.6.2.1 Implementation plan for EMP

The implementation plan for management of environmental and social impacts should be structured according to the following phases of the road project:

(a) Measures to be incorporated into the detailed design of the road;
(b) Measures to be taken during construction; and
(c) Measures to be taken during operation of the road.

Appendix 10 contains an example of a summary table which presents the activities and mitigation targets of the EMP and assigns responsibilities to implement the mitigation measures. In order to provide specific guidance to the road designers, the contractors and the road operator, the summary table should advantageously be subdivided into three tables covering measures to be incorporated into the detailed design phase, measures to be taken during the construction phase and measures to be taken during the operation of the road. Appendix 11 contains an example of a strip map which presents locations and description of impacts and the required mitigation. The strip map should be of the same scale as that of the feasibility study. The strip map will guide the contractor and road authority in implementing the required mitigation measures effectively and satisfactorily.

2.6.2.2 Environmental Emergency Plan

The environmental emergency plan should identify critical incidents and vulnerable areas and populations during construction and operation of a road. The plan should assign roles and responsibilities for action in case of an emergency.

Typical emergencies in vulnerable areas during construction should include:

(a) Landslides and soil erosion on slopes;
(b) Siltation of water bodies due to spillage of materials, e.g. in connection with a bridge construction or similar river crossing;
(c) Pollution of water bodies due to spills of oil or chemicals during construction;
(d) Fires;
(e) Accidents from use of explosives in quarries; or
(f) Direct or indirect exposure of people to toxic compounds from spills and unintended discharges during construction.

The emergency plan for the road operation phase does not include normal traffic operations, but should address spills of fuel and chemicals in sensitive or inhabited areas. The plan should assign roles and responsibilities for action in case of an emergency. Inclusion of emergency telephone numbers to relevant authorities and institutions may be helpful.

2.6.2.3 Environmental Monitoring Plan

"Environmental follow-up" (or compliance monitoring) should be carried out during the construction phase (but it may also be extended in some cases to the operational phase). The objectives of the follow-up are to ensure the application of the EIA environmental measures and the regulatory requirements, including the mitigation measures. The follow-up activities may also, if required, re-orient the construction works and eventually improve project implementation.

The objectives of the environmental monitoring activities (i.e., effects monitoring) are to check whether the impact predictions were adequate and to verify the efficiency of mitigation and compensation measures.

2.6.3 Compensation and Resettlement Plan (CRP)

The social impacts of road projects should be avoided or reduced by using road bypasses to avoid built-up areas. Many social impacts may be related to land acquisition and the management of the resettlement process. Major potential impacts include:

(a) Displacement of people from an area;
(b) Loss of land, property, and businesses;
(c) Economic losses for affected individuals and families (e.g., loss of crops and economic fruit trees) with a temporary or permanent loss of income for subsistence (e.g., loss of a roadside location for an informal business);
(d) Equity issues (i.e., people with fewer resources and skills become more vulnerable);
(e) Social disruption and break-up of families due to displacement and relocation;
(f) Health problems and various forms of psychological depression;
(g) Loss of community benefits and social disintegration.

In general, involuntary resettlement should be minimized and where displacement is unavoidable, a compensation and resettlement plan (CRP) should be implemented as a development programme and in accordance with the Road Sector Compensation and Resettlement Guidelines, 2009.

The CRP should be prepared as a separate document and should be summarized in the environmental impact statement (EIS). In addition, relevant mitigation measures should be included in the environmental management plan (EMP). The principal objective of a CRP should be to re-establish (or even improve) the social and economic productivity of the displaced community.

2.6.4 Road Safety Audit (RSA)

If a road safety audit has been performed, then the audit report should be attached with the environmental impact statement (EIS) for information. A summary of its findings and recommendations should be included in the EIS. If a road safety audit has not been performed for the road project in concern, the EIA must address road safety issues and recommend measures to reduce risks of accidents. In any case, it should be stated in the EIS, whether a road safety audit was carried out or not.

2.6.5 Submission of Environmental Impact Statement

The road authority in a member state should submit the environmental impact statement (EIS) together with a filled EIS submission form. The submission form appears in Appendix 12. The EIS must be accompanied by a compensation and resettlement plan (CRP) and a road safety audit report, if such documents have been produced. It should be noted, however, that the National Environmental Management body of a member state has no authority to approve or reject these

accompanying documents. They should merely be provided for information and to provide the full picture of mitigation related to the project.

The road authority in a member state should submit a specified number of hard copies and one electronic copy of the draft EIS and the EIS submission form to the National Environment Management body of a member state. One hard copy and one electronic copy of the draft EIS and the EIS submission form must be submitted to the Ministry responsible for road sector, in the department dealing with Environment.

2.6.6 Review of the EIS

2.6.5.1 Review

Upon submission of a draft environmental impact statement (EIS), the National Environment Management body of a member state should review the adequacy of the EIS and provide its comments and inputs to the road authority.

The National Environment Management body of a member state should invite its Technical Advisory Committee (TAC) to take part in the review. Comments to the road authority of a member state and its environmental expert are usually provided in a meeting where also the TAC is present. Based on the comments and inputs from National Environment Management body of a member state and the TAC, the environmental expert will finalize the EIS, and the road authority of a member state must should the EIS to the National Environment Management body of a member state for final approval.

2.6.5.2 Public Hearings

In the course of the review process, the National Environment Management body of a member state may decide to conduct public hearings to obtain further views of the public regarding the project in concern. The National Environment Management body of a member state will be responsible for conducting public hearing(s). The outcomes of the public hearing(s) will feed input into the finalization of the EIS and the environmental permitting process together with the comments and inputs from the review process.

2.6.7 EIA Certificate

2.6.6.1 Environmental Permitting

Based on an adequate EIS, the Minister responsible for the environment (advised by the National Environment Management body of a member state) will make his decision regarding environmental permitting of the project. In making a decision, the Minister responsible for the environment should take into account:

(a) The findings and recommendations of the EIS;
(b) The comments made by relevant ministries, institutions and other interested parties;
(c) The concerns raised at public hearings, where applicable;
(d) Advice of the Director of Environment (DOE); and
(e) Other relevant information, as required.

If the project is in compliance with requirements under the Environmental legislation of a member state, the Minister responsible for the environment will issue an EIA certificate with attached environmental conditions for the certification. The format of the certificate appears in Appendix 13. The EIA certificate will be communicated to the road authority of a member state, and a copy of the

certificate will be made available for inspection by the general public in National Environment Management body of a member state.

2.6.6.2 Change of EIA Certificate

In case of severe non-compliance with environmental legislation of a member state, the Minister responsible for the environment has the right to decline an environmental permission. In this case, the project must not be implemented.

Based on the outcomes of the monitoring, the self-audits and the possible control audits, the Minister responsible for the environment may at any time during the project cycle revoke the EIA certificate or amend the conditions attached to the EIA certificate. Should unforeseen events or situations emerge, or should the project implementation turn out to have smaller/larger environmental impacts than anticipated from the EIS, the road authority of a member state may apply for a variation of the EIA certificate, based on which the Minister responsible for the environment may amend the EIA certificate. The form for application of variation appears in Appendix 14.

2.6.6.3 Transfer or Surrender of the EIA Certificate

The Environmental Assessment and Audit Regulations of a member state should contain provisions for transfer of the EIA certificate from one certificate holder to another, and for surrender of the EIA certificate.

2.6.6.4 Appeal System

Any road authority or person in a member state who is aggrieved by the environmental permitting decision of the Minister responsible for the environment may appeal the Minister's decision to the Environmental Appeals Tribunal.

2.7 Tendering, Contracting and Detailed Design Phases

Tendering, contracting of contractor(s), and detailed design are the phases, in which the road authority in member state should make sure that the conditions in the EIA certificate are converted into actions which should ensure that the road project implementation will comply with environmental standards and requirements. The overall environmental management actions during these phases include:

(a) Incorporating mitigation measures into detailed design;
(b) Itemizing relevant environmental and socio-economic measures and include them in the Bill of Quantities for the project;
(c) Including environmental requirements in the tender documents; and
(d) Including special conditions on environmental performance and management in the contract of the contractor.

A focused and concise environmental management plan (EMP) should be helpful in this process, because it may be attached in part or in whole to the tender documents or the contract agreement. Environmental Management Actions during this phase of the project should include;

(a) Incorporating mitigation measures into detailed design;
(b) Itemize relevant environmental and socio-economic measures and include them in the Bill of Quantities for the project;

(c) Include environmental requirements in the tender documents; and Include special conditions on environmental performance and management in the contract of the contractor

A focused and concise environmental management plan (EMP) will be helpful in this process, because it may be attached in part or in whole to the tender documents or the contract agreement.

2.7.1 Inclusion of Environmental Mitigation Measures into Detailed Design

For the recommendations of the environmental impact statement (EIS) to be effectively incorporated into the design process, there should be a collaboration and coordination between the EIA study team and technical/ engineering design team to ensure that important mitigation measures are integrated into the detailed design and technical specifications.

The environmental management plan (EMP) and the environmental strip map should contain specific requirements for inclusion of environmental considerations into the design. It is the responsibility of the road authority in a member state to oversee that all relevant environmental considerations are included in the detailed design of the road and to make sure that the road design is in compliance with conditions of the EIA certificate. It is advised that the road authority in a member state involve the environmental expert who carried out the EIA study in this process.

2.7.2 Bill of Quantities (BoQ)

The road authority in a member state should ensure that all relevant environmental and socio-economic measures are itemized and included in the Bill of Quantities for the road project, including:

(a) Technical measures;
(b) Logistic measures;
(c) Measures to ensure environmentally and socially friendly construction works;
(d) Compensation of project-affected people (PAP) cf. the specifications of the compensation and resettlement plan (CRP);
(e) Road safety measures;
(f) Environmental supervision of construction works; and
(g) Training on environmental and social aspects related to the road works.

It is advised that the road authority in a member state involve the environmental expert who carried out the EIA study in reviewing the BoQ with respect to environmental management requirements.

2.7.3 Contract Tendering and Reviewing Bids

All environmental issues should be covered in the contract conditions and specifications to be able to enforce good environmental practice. Each environmental clause should state: what needs to be done; where it needs to be done; when and how the actions will take place; and who is responsible. Clauses should be explicit leaving little room for misinterpretation (the template is appended). The contractor must be obliged to assign a competent and qualified person who should supervise and oversee that the road works take place in accordance with good environmental practices and in compliance with the conditions of the EMP and the EIA certificate.

Environmental management requirements should be included as special conditions in the contract agreement with the contractor. It is advised that the road authority in a member state involve the environmental expert who carried out the EIA study in reviewing the tender documents with a view to inclusion of the relevant specifications for environmental management.

The road authority in a member state may require the contractor to present an environmental management implementation plan. This plan should show in detail how the contractor intends to comply with the EMP and the environmental conditions of his/her contract. Specifically, the contractor should describe the means and mechanisms to ensure respect of the legal and environmental requirements and the good operation of the construction works, equipment, and installations. Construction sites are constantly changing and systems must be in place to review and modify control measures to ensure that they remain effective.

2.7.4 Environmental Training of Contractors and Workers

Once the contract is awarded and when required by the EMP, an environmental management training programme should be initiated. Training should be provided to all principal stakeholders involved in environmental management, including the road authority and the contractor's staff, as well as members of the local community.

For training to be cost effective, it should involve on-the job training. For example, practical training may involve doing some re-vegetation of steep slopes to prevent soil erosion by using special grass (e.g., Vetiva grass, Vetiveria zizanioides). Other training may focus on building the capacity of the road authority staff or creating general environmental awareness (e.g., public awareness programme on the link between road operation, maintenance, and the environment).

2.8 Construction Phase – Supervision and Monitoring

2.8.1 Environmental Follow-up Activities

During the construction phase, the road authority in a member state should monitor the contractor perform his/her work in compliance with the environmental management plan (EMP) and the conditions of the EIA certificate. The road authority in a member state should also ensure that remedial actions are taken in case of non-compliance.

In practical terms, the road authority in a member state should ensure that suitable requirements for environmental supervision are part of the contractors' contractual obligations through a requirement for an environmental supervisor. The road authority in a member state should further ensure that the supervising road engineer has the responsibility to follow up on environmental management and performance issues.

Environmental management and performance should be a standard point of discussion at each construction site meeting in the presence of and the contractor's environmental supervisor. Members of the relevant Environmental Management Committee (EMC) and or the MOID Department of Safety and Environment (DSE), Environment Section may be invited as appropriate. The main monitoring and follow-up issues and activities during the construction phase of a road project should include:

Pre-construction activities:

(a) The contractor's assignment of an environmental supervisor;
(b) Going through the EMP at the initial construction site in order to make sure that contents, roles and responsibilities of the EMP are understood and will be adhered to and make agreements on activities and time schedule;
(c) Environmental supervision of site preparations; and
(d) Environmental training of staff, as required.

Construction activities:

(a) Regular updates on progress of EMP implementation on the monthly meetings between the contractor (and his/her environmental supervisor) and the supervising road engineer;
(b) Supervision by the contractor's environmental supervisor;
(c) Supervision by the supervising road engineer;
(d) Environmental compliance monitoring;
(e) Follow- up activities in case of emerging unforeseen environmental issues;
(f) Follow-up activities in case of non-compliance; and
(g) Self-audits by the road authority as deemed necessary by the road authority, the MOID DSE or the relevant EMC.

Activities during demolition of work site:

(a) Final environmental report from the contractor;
(b) Self-audit by the road authority; and
(c) Control auditing by the National Environment Management Council, as required.

2.8.2 Pre-construction Activities

2.8.2.1 Assignment and Functions of Environmental Supervisor

The road authority in a member state should make sure that the contractor assigns an independent and qualified environmental supervisor for supervision and monitoring of the contractor's work. In order to make sure that the environmental supervisor possesses the sufficient professional qualifications and competence. The road authority in a member state should approve the person who is assigned. If there is a requirement to measure noise, emissions to the air or discharges to water bodies, the environmental supervisor should be capable of performing such measurements.

It should be noted that any qualified person might be accepted for this position. It is not a requirement to use one of the environmental experts registered with the National Environment Management body of a member state.

The environmental supervisor must have full insight in the environmental management plan (EMP) and the conditions of the EIA certificate in order to be able to perform his/her job satisfactorily.

2.8.2.2 The first Construction Site Meeting

The first project construction meeting is important to review major environmental impacts and mitigation measures, and to analyze the environmental impacts and mitigation measures of the temporary infrastructure proposed by the road authority and the contractor.

The following items should be put on the agenda of the first construction site meeting:

(a) reviewing the responsibilities of all participants, as defined in the EMP;
(b) reviewing the construction work schedule;
(c) reviewing the proposed monitoring activities, equipment, and sample locations;
(d) reviewing changes in the project activities and adjust the EMP, if required;
(e) reviewing the proposed location of the temporary infrastructure and installations and the proposed route for the transportation of materials;
(f) identifying major environmental impacts, including the ones related to temporary infrastructures and ensure that the responsible parties will implement the relevant mitigation measures;
(g) scheduling the next meeting in a timely way to enable the RIA environmental specialists to attend and to avoid delays in the construction activities;

(h) informing the contractor about the environmental activities scheduled during the next stage of the construction activities; and
(i) sharing contact details with all participants to ensure that an environmental specialist will be contacted if there are environmental problems during the construction activities

The following should participate in environmental discussions at the first construction site meeting:
(a) The supervising road engineer;
(b) The contractor;
(c) The contractor's environmental supervisor;
(d) Any other road engineer or road technician required by the road authority; and
(e) Any other environmental specialist required by the road authority

It is common practice that environmental and/or social officers of the road authority in member state in department of environment unit participate in the first construction site meeting for national and regional road projects to contribute with their expertise and experiences, and to oversee that environmental conditions are adhered to.

In addition, the Ministry responsible for road sector and relevant local government environmental management committees (EMCs) may participate as convenient.

2.8.2.3 Environmental Supervision of Site Preparations

The contractor's environmental supervisor in collaboration with the supervising road engineer should be pro-active in ensuring that the required environmental and socio-economic measures are taken in the location of activities and site preparations, including:
(a) Construction site;
(b) Source of water supply;
(c) Construction base camp;
(d) Quarry and mineral extraction sites;
(e) Spoil deposit sites;
(f) Asphalt mixing plant and cement batching plant;
(g) Construction traffic between all sites;
(h) Occupational health and safety (all areas); and
(i) Possible other activities.

2.8.2.4 Environmental Training

Environmental training of the contractor's staff and management should be carried out in accordance with the requirements of the environmental management plan (EMP). Usually the environmental supervisor should carry out this training. The road authority's staff and management may participate in the environmental training, as appropriate.

2.8.3 Environmental Supervision

Regular and continual environmental supervision is important to ensure that the contractor complies with the requirements of the environmental management plan (EMP) and the conditions of the EIA certificate.

The contractor's environmental supervisor in collaboration with the supervising road engineer should be responsible for overseeing that the environmental management requirements are met. The environmental supervisor should be further responsible for proposing remedial actions in case of non-compliance or occurrence of non acceptable environmental or socio-economic effects, and

for identifying needs for follow-up environmental training of the contractor's staff and management and carry out this training.

The environmental supervision should cover all aspects of the contractor's work. The contractor should upon advice by the environmental supervisor notify the road authority in a member state on any irregularity or event outside the control of the contractor, if the irregularity might result in undesired environmental or socio-economic effects. Such irregularities or events may for example include:

(a) Untimely delivery of construction materials (causing risk of dispersion of the construction materials in the surrounding environment);
(b) Incorrect interim storage of construction materials by the supplier (e.g. on the roads causing limited passageway and increased risk of accidents as well as risk of siltation of ditches, culverts and drains);
(c) Untimely supply of machinery or equipment (e.g. causing prolonged time for interim storage of construction materials); or
(d) Supply of inadequate machinery or equipment (e.g. making the contractor unable to perform up to standard).

The road authority in a member state and the supervising road engineer should assist the contractor in ensuring corrective measures to counteract undesired environmental or socioeconomic effects of such events.

2.8.4 Environmental Compliance Monitoring

The environmental monitoring should focus on:

(a) The extent to which the contractor is complying with the environmental specifications and contract conditions (compliance monitoring); and
(b) Any unforeseen environmental impacts (i.e., the failure or inadequacy of the mitigation measures) and recommendations on how to manage unforeseen impacts.

The objectives of environmental compliance monitoring are as follows:

(a) Applying the identified mitigation measures;
(b) Ensuring that mitigation measures, contract conditions, and specifications are fully implemented during construction;
(c) Identifying additional mitigation measures, as needed;
(d) Assessing the efficiency of the mitigation measures and make recommendations for not only the current project, but also for future projects; and
(e) Resolving problems encountered during the construction phase.

The environmental monitoring team should include:

(a) The Contractor's environmental supervisor;
(b) The supervising road engineer;
(c) Any other road engineers or technicians required by the road authority; and/or
(d) Any other environmental specialists required by the road authority.

This team should ensure timely and correct implementation of the mitigation measures. Typically, the most critical project elements to be monitored include:

(a) Implementation and effectiveness of erosion and sedimentation control measures (e.g., prompt re-grassing of disturbed areas);
(b) Water management issues (e.g., water logging, flooding, and drainage issues);
(c) Waste disposal issues (e.g., disposal of demolition debris, spoil, used oil, old tires, and scrap metal, and the management of liquid and solid wastes from the camps);

(d) Management and reclamation of borrow pits and quarries;
(e) Social impacts (e.g., related to compensation issues, resource use conflicts, and communicable diseases);
(f) Road safety (e.g., accidents and accident risks during construction);
(g) Noise and dust problems during construction works (e.g. close to schools, hospitals and other sensitive human activities); and
(h) Occupational health and safety (e.g., the safe handling and storage of materials and safe operating procedures).

Construction-phase monitoring should address compliance with all environmental and socio-economic contract specifications. The construction site should receive the most attention, but other sites and associated activities must also be considered, such as:

(a) Source of water supply;
(b) Construction base camp;
(c) Quarry and mineral extraction sites;
(d) Spoil deposit sites;
(e) Asphalt mixing plant and cement batching plant;
(f) Construction traffic between all sites; and
(g) Occupational health and safety (all areas).

Appendix 17 provides standard forms for monitoring of the most common construction works, they are a) road development; b) borrow pits and quarries, and c) construction camp sites, stores and workshops. The forms may be modified to conform to the specific issues of concern of the road project.

The road authority in a member state should keep records of all monitoring reports and forms, and the monitoring reports must be made available to the National Environment Management body of a member state, the relevant environmental management committee (EMC), the Ministry responsible for road sector in the Department dealing with the environment.

Some construction activities are not defined during the design phase, such as the location of borrow-pits, temporary access roads, and camps. Such construction activities could create major environmental impacts and should be reviewed for approval by National Environment Management body of a member state or as per the specified requirements of the environmental management plan (EMP) or the EIA certificate.

2.8.4.1 Maintenance and Calibration of Equipment

The environmental specialist should ensure that all monitoring equipment has been adequately calibrated before taking measurements. Note that some equipment must be calibrated in the authorized laboratory every three or six months to ensure the quality of the measurement (e.g., the sound-level meter).

2.8.5 Meetings and Communication

Progress on the implementation of the environmental management plan (EMP) should be a standard agenda item on the construction site meetings, and the contractor's environmental supervisor should be present at the discussion of this item. In addition, other environmental specialists may be invited, as required.

These following sub-items pertaining to environmental management should be put on the agenda of the construction work meetings:

(a) Review the status of any problem addressed in the previous meeting; propose additional mitigation measures, if a problem has not been solved;
(b) Review the main construction activities and any environmental problem that occurred since the last meeting;
(c) Review the construction activities and general environmental performance, as listed in the EMP.

Decisions made should be minuted, and records of the minutes should be kept with the road authority. The records should be made available to the National Environmental body of a member state, the relevant environmental management committees (EMCs) and the road authority of a member state and Safety and Environment Unit (SEU) upon request.

2.8.6 Final Inspection and Handing Over of the Site

This stage mainly involves demobilizing (decommissioning) temporary infrastructure, installations, and equipment, and restoring the sites. The environmental specialists of the road authority should be present at the final inspection and handing over of the site. The environmental specialists of road authority in a member state are its officers of the Safety and Environment Unit (SEU).

In the hand-over process, the contractor's compliance to environmental contract conditions and specifications is confirmed. Specific attention should be paid to the clearance of waste and returning disturbed land to a natural and useable condition. An inspection of all off-site activities, such as quarry sites, should be conducted.

2.8.7 Self-Auditing

A self-audit of a road project may be instituted by the road authority in question, by the Ministry responsible for road sector, in the department dealing with the environment. The purpose of a self-audit is control whether all relevant environmental conditions in the EMP and the EIA certificate are complied with, to investigate the effects of the environmental management measures, and to propose remedial actions in case of unsatisfactory performance or unsatisfactory effect of the environmental management measures during the construction.

A self-audit should be carried out by a team of experts, who are not directly involved in the implementation of the project in question. In this regard, it could be a hired consultant. The road authority in a member state and the contractor are obliged to provide the audit team with all required data and information for the audit.

The audit report must be submitted to the responsible road authority. The road authority in the member state is obliged to file and keep records of audits performed, and to institute remedial actions to be taken to counteract any major environmental or socio-economic impacts. They are also obliged to, at their own initiative, to involve the National Environment Management body of a member state and the relevant environmental management committee (EMC) in case of severe noncompliance, lack of environmental performance or occurrence of unforeseen major environmental or socio-economic impacts. Any self-audit report must be made available to the NEMC upon their possible request.

The road authority in a member state should bear the overall cost of a self-audit, and the contractor must bear the cost of his/her inputs to the audit.

2.8.8 Control Auditing

The National Environment Management body of a member state may at any time during the construction phase cause a control audit to be held. The objectives and activities of a control audit will be determined by the National Environment Management body of a member state, and the National Environment Management body of a member state will bear the costs of this type of audit.

2.9 Traffic Operations and Road Maintenance

2.9.1 Environmental Monitoring and Follow-up

The following measures should be considered during the maintenance phase:

(a) Ensure timely maintenance to prevent/minimize road degradation, flooding, road accidents, traffic noise, and landscape degradation;
(b) Maintain grass and other roadside vegetation to slow water flow and trap suspended matter, and hence to prevent/reduce soil erosion; and
(c) Prune bushes and trees and cut grass frequently to prevent safety and fire hazards related to excessive amounts of vegetation along the road.

2.9.2 The Road Authority's Environmental Auditing

Some EIA certificates require the submission of an audit report, usually about one year after completion of the construction works. The post-project evaluation serves this purpose, as well as providing the necessary feedback to the project-planning phase for cost-effective environmental management. The goal of a post-project evaluation is to confirm that the project was implemented in accordance with the terms and conditions of the EIA certificate and to take remedial measures, as required.

The critical goal of a post-project evaluation should be to apply the lessons learned from completed projects to future road works. Important tasks should include:

(a) Evaluating and implementing remedial actions during road operation;
(b) Conducting consultation with key stakeholders;
(c) Incorporating lessons learned into future road project planning; and
(d) Monitoring and evaluating effects.

The purpose of the audit should therefore be to:

(a) Monitor compliance with the conditions of the EIA certificate;
(b) Review predicted impacts of the environmental impact statement (EIS);
(c) Modify or develop mitigation measures to reduce the effects of undesired, unanticipated impacts;
(d) Provide lessons learned to apply to future projects by measuring the accuracy of past predictions and the effectiveness of the applied mitigation measures; and
(e) Review the effectiveness of the environmental management plan (EMP).

Other relevant items of the audit may include:

(a) Environmental adequacy of the road maintenance plan;
(b) Control of road drainage;
(c) Control of soil erosion;
(d) Control of litter accumulation on the road side;
(e) Storage and management of maintenance materials and equipment;

(f) Proper management of pesticides and other chemicals, if used in weed control, so that sensitive receptors are not negatively affected;
(g) Avoidance of direct discharge of run-off of to receiving water bodies;
(h) Reduction of pollutant concentrations in run-off by maintaining dense grass cover, increasing grass height, and leaving cuttings on the ground;
(i) Proper management of the roadside and median vegetation, using native species;
(j) Proper disposal of wastes from road maintenance activities;
(k) Proper safeguarding against exposure to noise and emissions from vehicles;
(l) Proper safeguarding against road accidents; and
(m) Proper control of undesired encroachment on the road reserve.

Public participation in the audit process should be encouraged in order to obtain the views and concerns of the concerned parties with respect to impacts of the road and the road operation.

2.9.3 Control Auditing

The National Environment Management body of a member state may at any time during the road operation phase cause a control audit to be held. The objectives and activities of a control audit will be determined by the National Environment Management body of a member state, and the National Environment Management body of a member state will bear the costs of this type of audit.

The National Environment Management body of a member state may decide that the environmental conditions of the EIA certificate may be reviewed and revised based on the outcome of a control audit.

2.9.4 Environmental Management in Road Maintenance

The road authority in a member state should be responsible for proper environmental management of road operations and road maintenance during the operation phase of the road. The relevant environmental bodies may request for advice on emerging situations, as required.

The environmental management plan (EMP) should include environmental management requirements for the operation phase of the road. Even if the EMP is not covering the operation phase, relevant environmental and socio-economic issues should be addressed properly in road maintenance plans and road maintenance projects.

The management requirements may focus on:

(a) The need for monitoring and follow-up on road traffic operations, especially safeguarding against noise and dust exposure, air pollution and road accidents; and
(b) The need for routine and periodic maintenance activities that will remedy undesired environmental impacts during operation, such as measures to:
    – Ensure proper road drainage;
    – Safeguard against erosion of the road;
    – Safeguard against erosion of the surroundings caused by the road;
    – Ensure proper surfacing to reduce noise and dust generation;
    – Proper maintenance of shoulders and walking/biking paths; and
    – Preventing people from exposure to noise, dust and air pollution resulting from road operations and vehicle emissions; and
    – Undesired use of the road reserve.

2.9.5 Environmental Management of Vehicles and Traffic Operations

Traffic operation is a major source of ambient noise, dust and air pollution. The problem is particularly pertinent in densely populated and heavily trafficked areas, where both noise and exposure to dust and air pollutant may rise to hazardous levels.

General plans, programmes or measures to manage emissions from vehicles to ensure compliance with vehicle emission standards is the responsibility of the Ministry responsible for road sector, in the department that is dealing with the environment.

Noise, dust and air pollution protection measures that can be built into the design or operation of the road falls under the responsibility of the road authority in a member state, including for example:

Noise abatement:

(a) Putting restrictions on idle running engines;
(b) Ensuring a smooth traffic flow (avoiding queues);
(c) Prohibiting heavy duty vehicle traffic on roads in sensitive areas (e.g. residential urban areas);
(d) Erecting noise protective walls; or
(e) Low-noise surfacing of the road.

Dust protection:

(a) Cleaning or sprinkling of road surface; or
(b) A noise protection wall will also safeguard against dust).

Reduction of vehicle emissions:

(a) Putting restrictions on idle running engines;
(b) Ensuring a smooth traffic flow (avoiding queues); or
(c) Prohibiting heavy duty vehicle traffic on roads in sensitive areas (e.g. residential urban areas).

2.10 Decommissioning

Once established it is highly unusual that roads are decommissioned. Basically decommissioning is the end of the project life. In case decommissioning is called for, the decommissioning report should be prepared either as part of the EIS or separately, indicating how impacts will be dealt with, including the costs of mitigation measures. The following guidelines should be followed while decommissioning;

(a) Developer should undertake the decommissioning of the project as per the proposals stipulated in EIS
(b) Environmental management body of a member state should continue to monitor implementation of the decommissioning plan, including rehabilitation of the land and other resources that were affected by the project, and
(c) The decommissioning report must ensure issues such as welfare of workers, resources users as well as their general livelihoods are not worse off as a results of decommissioning

2.11 Guidelines for Socioeconomic and Cultural Impacts Assessments

2.11.1 Introduction

Key social issues in the context of the road projects are: poverty; gender concerns; persons with disability; HIV/AIDS and STIs (Sexually Transmitted Infections); occupational health and safety; and cultural features.

2.11.2 Socioeconomic impact assessment

2.11.2.1 Goals and Objectives

Generally, socio-economic impact assessments should be conducted with a view to preventing or moderating unacceptable adverse social environmental effects from the proposed actions and projects. The assessment should also aim at producing the following social benefits:

- because people's opinions are critical in the decision making process, social impact assessment should involve consulting and sensitizing the community members to solicit their views with regard to the impact and magnitude of the proposed road project on their social and economic well-being;
- the assessment should identify the inequities and inequalities that are likely to be created or exacerbated by a road project. This helps to design mitigation measures that incorporate equity concerns, thereby reducing vulnerability of the local people through targeted provision of road infrastructure and services that benefit rather than lead to displacement, loss of income, food insecurity and injuries. It is also important that the proposed mitigation measures pay attention to the unique concerns of women, the elderly, unskilled/unemployed people and people living with HIV/AIDS;
- In thinking about the vulnerable population, it is also useful to examine consequences of the non-development option of the road to the community especially the vulnerable. For instance, the nature of the terrains and the existence of national parks in given areas may be used to disqualify the implementation of a project at the expense of the social benefits of the people who are physically isolated and therefore their poverty is perpetuated by poor access to capital assets.
- Socio economic impact assessment also provides a foundation for measuring the cumulative impacts (long term) of road projects on the community's economic resources. While a new road project may create employment, influx of migrant workers may exert pressure on the existing social facilities, which leads to occupational health related problems (cholera and HIV/AIDS, for example). The degradation of natural resources may lead to scarcity of firewood and herbal medicine and land degradation causing food insecurity and deepening poverty; and
- For purposes of monitoring and evaluation, socioeconomic impact assessment generates comparative data for pre- and post- project implementation, including indicators which can be used to measure the extent to which road project activities are directly and indirectly affecting people's livelihoods and how the livelihood strategies are affecting their participation in and benefit from the project. This in turn helps to improve the mitigation measures that can be adapted to enhance livelihood impacts for target groups while remaining consistent with the overall project purpose.

2.11.3 Conducting a socioeconomic impact assessment

Measuring socioeconomic impacts of a road project requires both quantitative (questionnaire surveys) and qualitative (participatory) methods and tools both of which rely heavily on community participation. Appendix 27 shows a template for conducting Socio-economic Impact Assessment.

While formal quantitative/questionnaire surveys are extractive in nature, they are complementary to and informed by the participatory methods and provide precise means of verifying existing data and providing comparisons between survey sites. Participatory methods on the other hand use tools that facilitate learning between facilitators and participants without the use of pre-determined questions,

but rather a selection of exercises that promote involvement of vulnerable groups, using visual techniques to aid effective communication.

Whereas the quantitative methods target households, transport operators and commercial business owners, who are deemed to be the largest beneficiaries of road projects, the participatory qualitative methods incorporate the vulnerable groups, including women, youth, and the elderly, who bear a disproportionately larger share of the negative impacts.

Quantitative and participatory surveys should be disaggregated by gender, age and income to capture demographic variations in livelihood activities and mobility patterns.

Sampling of households for the former and disaggregated groups for the latter should be made simple to avoid complication in data analysis. The quantitative sample should be representative of the population affected and should therefore be large enough that the data is both reliable and significant. Participatory methods are utilized to facilitate dialogue pertaining to the impact of a road project particularly on the poor and vulnerable people living and working in the vicinity of the project. The methods also highlight the benefits, disbenefits and opportunities afforded to the rural poor before and after the implementation of the project.

For baseline surveys, households should be selected randomly but using stratification (by wealth ranking) to ensure that certain groups in the population, delineated by age, gender, income, occupation are included in the survey. In order to provide comparative data for pre- and post-project implementation, questionnaires should be designed to identify demographic and household composition, household incomes and expenditures, travel patterns, and transport charges.

In order to identify the most important concerns and priorities of the community in the context of the specific characteristics of the proposed road projects, it is necessary to first define the scope of the assessment. This is important because the impact associated with a new road will vary depending on the type, size, and location of the project and the socio-economic characteristics of the community. So it is important to be familiar with both the project characteristics and the social and economic resources of the community. Surveys and interviews are good methods to identify priorities and concerns during site appraisal and reconnaissance visits. These enable the survey team to acquire accurate impression of the community with regard to demographic composition and their livelihood activities.

- Sites for conducting socio-economic assessment are chosen based on secondary data, existing partnership and activities which were verified during the reconnaissance visits.
- Key informants are interviewed to gain a better understanding of the sites.
- One or more community meetings are held to obtain an overview of strength, constraints, institutions and widely held priorities for action.
- More detailed participatory work is undertaken to ascertain the validity and significance of factors raised and to examine variation across groups.
- Once a proposal begins to move into an operational phase additional in-depth investigation may be required.
- Using the indicators identified during the designing phases, the implementation process is monitored and further corrective action and mitigation measures are designed including road safety measures, safety issues related to road construction, labour and resettlement issues of local communities.
- Continued monitoring of the road construction and impact on displaced people for a defined period of time.

2.11.4 Occupational health and safety

Road projects are one of the high-risk jobs with a high propensity for occupational hazards especially during construction and repair. The main hazards are accidents that may lead to cuts, bruises, permanent functional, sensory and cognitive impairments, and even death. To mitigate the above occupational hazards, the following considerations should apply:

- indicate plans for occupational health and safety training skills for road workers;
- provide compensation schemes to benefit those who become victims of accidents;
- provide protective wear especially for those involved in the road construction process and who are vulnerable to accidents;
- contractors should provide plans for emergency health facilities at construction sites to enable the provision of instant first aid for victims of accidents and other hazards;
- contractors should provide safety mechanisms at work places and equipment that include operations and maintenance concerns;
- contractors should provide plans for reducing accidents, which are frequently the causes of disability in road construction and maintenance processes; and
- there must be a provision for monitoring adherence to safety rules

2.11.5 Cultural Heritage

The impacts on cultural heritage by road projects should be assessed as part of the EIA process. Cultural heritage is part of humanity's relationship to the world and past achievements and discoveries. Cultural heritage, also often referred to as 'cultural property', 'cultural patrimony' or 'cultural resources', is defined as the present manifestation of the human past. It refers to sites, structures and remains or archaeological, historical, religious, cultural or aesthetic values.

2.12 Compensation and Resettlement Guidelines

2.12.1 Background

Road construction projects often necessitate the acquisition of land for the purposes of the road corridor and the road reserve. This may result in the encroachment of land and property, damage to sites of cultural or personal importance, disruption of sources of income, and in the displacement of people. In most cases, these disruptions occur against the wishes of those affected, or without their informed consent, despite their status as project beneficiaries. The repercussions can be serious, resulting from the loss of land and crops, dismantlement of production systems, disintegration of the social fabric and loss of social values, propagation of sexually transmitted diseases and HIV/AIDS, soil erosion and water use conflicts. Consequently, rather than bringing the economic benefits to project area's direct zone of influence, a road project may instead induce impoverishment.

The accurate valuation of losses is difficult, given that the associated costs and the social and psychological impacts of affected people are complex to calculate. Eligibility may in some cases also be difficult to assess. Social interaction between neighbourhoods can be disrupted or even destroyed completely by road projects. Cash compensation within resettlement programmes has other difficult aspects such as quality-related aspects in the assessment of compensation.

As a result complaints by project affected people often focus on inadequate rates and on the lack of alternative assessment techniques. Delays in paying the compensation are also a major concern. Often compensation provisions and property acquisition practices do not provide enough resources

to enable affected people to purchase replacement assets. There are several reasons for this including:

- under-valuation of assets;
- changes in price of the alternative properties;
- timing of payments whereby delayed payments lead to loss of value (e.g. because of inflation);
- unsuitable manner of payment whereby it is not clear whether people should be paid lump sum or in instalments; and
- misappropriation of funds earmarked for compensation

In view of the foregoing constraints, monetary compensation may not be meaningful to local communities. Consequently, there is a need to put in place a community-driven development plan to implement compensation.

In cases of compensation of vulnerable groups, e.g. old people (>65 years), women heads of households, widows, single mothers, orphans, physically and mentally challenged people and the infirmed, cash compensation creates more problems because they may not have the sufficient capacity to manage the planning, supervision and construction of new homes.

In order to address and minimize the social impacts related to displacement of persons due to road construction operations, compensation and resettlement plans are prepared. These plans identify those persons along the road who will be physically displaced as a result of the construction of a road, and those persons who will have to relinquish their land or assets for the purposes of the road. The plans provide socio-economic profiles on all persons affected by the road projects, and give the cost of resettlement (including the resettlement activities), as well as the cost of land that may have to be acquired for the roads.

2.12.2 Preparation of a Full Compensation and Resettlement Plan (CRP)

2.12.2.1 Overall Objectives of a CRP

The objectives of a CRP should be to ensure that:

- Displaced persons/parties receive benefits from the project that is displacing them;
- Social disruption is minimized;
- Resettlement activities are executed as sustainable development programmes;
- Affected persons are consulted throughout the planning and implementation stages of the compensation and resettlement process;
- Income restoration is integral to the C&R process;
- There is a net improvement in livelihood activities and standards of living of affected persons as compared with their situation prior to displacement or implementation of the project;
- Fair and prompt compensation (in cash or in kind, as preferred by the Project Affected Person (PAP)) is paid before road works activities begin;
- Resettlement timetables are well coordinated with road works activities;
- An adequate budget is provided for the C&R process.

The guidelines for CRP are anchored in the following steps, the details of which are described in the subsequent sections;

- Identification of Project Affected Person
- Socio-Economic Profile of PAPs
- Compensation Characterization

- Compensation and Resettlement Requirements
- Impacts Assessment of Resettlement
- Implementation of the CRP
- Grievances and Conflict Resolutions
- Monitoring, Evaluation and Reporting

2.12.3 Identification of Project Affected Person (PAP)

2.12.3.1 Alignment Surveys

As part of the preliminary engineering design, the engineers survey the road alignment to establish the existing centreline and the centreline of any proposed realignments as the new design may require. The surveyors also routinely identify properties that fall within the road reserve, although they do not distinguish the type of property at this stage. This is a stage that project preliminarily identifies the PAP.

2.12.3.2 Consultations during CRP Preparation

Consultation with the local administration is essential throughout the entire CRP process from preparation to implementation to completion. While the district administration will be involved at the district level and specifically in grievance redress, the ward and village administrations are directly in touch with the local communities and are therefore key players in their mobilization, dissemination of information and mediation in necessary.

In order to carry out the consultations in a systematic manner, a Communication Strategy should be drawn up as part of the CRP. The strategy should highlight ways and means of communication throughout the C&R process, including:

- Means for notification of consultations (e.g. through district/ward/village personnel, notices displayed at the district/ward/village offices);
- Methods for sensitization (e.g. public hearings, newspapers, radio or other media)
- Who should be consulted;
- Who should carry out consultations;
- How, when and where consultations should take place.

2.12.3.3 Consultations with Local Administration

During the preparation of the CRP, consultations with the authorities are envisaged at least three stages:

1. Initial (Reconnaissance) Surveys
2. PAP Census and Socio-Economic Survey
3. Immediately after the PAP Census and Socio-Economic Survey

After the PAP census is complete, consultations should be held with the local administrations, in order to:

- Approve the list of PAPs, and confirm the eligibility of the listed PAPs;
- Reconfirm areas to where affected households can be relocated;
- Confirm that the village, ward, district and town administrations are aware of their specific responsibilities regarding the monitoring of the compensation and resettlement process, including ensuring that:
    - The houses built from the compensation moneys received are of the same standard;
    - New houses build are rented out at the same rates as the previous ones;

- PAPs who receive compensation for their private houses must use that money to construct houses of the same standard as – or better than – their previous abode;
- They will provide special assistance to vulnerable groups such as the elderly, disabled, female-headed households and orphans;

2.12.4 Socio-Economic Profile of PAPs

2.12.4.1 PAP Census

The purpose of the PAP census should be to identify each and every project affected party (that is people as well as private and public institutions). Information collected during the census should be correctly recorded in Valuation Form provided by the Ministry responsible for Lands in a member state (although this is not a legal requirement as it is only considered as a standard practice). The following information should be recorded on the Form:

i. The PAPs valuation reference number (indicating the proponent – in this case the road authority of a member state – the location and a sequential number);
ii. The PAP's name;
iii. The date of the census;
iv. Location of affected property: plot number (or Land registration No.), house number, street name, village or town;
v. A sketch is drawn of the property, indicating affected portions, cropped area, fallow land, open and covered buildings, etc.
vi. A photograph of the property is taken with the PAP in the foreground holding a large piece of paper indicating his reference number.

2.12.4.2 Land/Property Assessment Survey

The following Information on the property and assets affected should also be collected on Valuation Form. The following information should be collected:

i. Type of property (e.g. single storey commercial building, double storey residential house, row of single storey shops, etc);
ii. Details of construction (type of roof, ceiling, walls, windows, doors, floor);
iii. Accommodation characteristics: number of bedrooms, sitting room, dining room, and outhouses (bandas);
iv. Condition of the property (i.e. state of repair);
v. Purpose/use of property (whether residential, commercial, institutional, religious, agricultural or a combination of two or more of these categories);
vi. Area of affected buildings/structures (built-up area);
vii. Types of crops grown;
viii. Area of cultivated land affected;
ix. Total area of the land.

Although the form does not explicitly ask for it, the following should be included in the survey of assets:

- Trees;
- Fences and/or boundary walls;
- Wells.

Valuation Form should be signed by the PAP, a representative of the local administration and the land valuer/surveyor.

2.12.4.3 Household Survey

The PAP census should give the number of people, households, properties and institutions that are affected by the proposed road project.

As a minimum, the following information should be collected during the socio-economic survey:

- Household Head and Structure
- Household Size
- Gender Structure
- Age Structure
- Ethnicity and Religion
- Migratory Status
- Occupations of the PAPs
- Income and Expenditure
- Education Levels
- Health Status

2.12.4.4 Vulnerable Groups

Vulnerable groups are those persons who require special assistance – physical and moral-during the compensation or relocation process on account of their age, a physical or mental disability, or their socio-economic and/or social status. Vulnerable persons may be defined as being:

- Old people (>65 years)
- Women heads of households
- Widows
- Single mothers
- Orphans
- Physically and mentally challenged
- The Infirmed

The implementers of the CRP should be readily able to identify vulnerable PAPs, so that it may be useful to list these PAPs separately and have their socio-economic data readily available (for example as a separate datasheet).

2.12.4.5 Mapping

Aerial photographs and digital mapping can be useful for predicting social and environmental impacts that are likely to occur as a result of resettlement. Maps of the project area should depict topographical conditions, woodlands and forests, water catchment areas, water sources (rivers, lakes), land use patterns (settlements, farms, plantations, etc), and infrastructure (such as schools, hospitals, market centres, administrative centres, roads and railways). Once data on location of all the PAPs is collated, together with potential relocation sites, this can be transposed onto the digital maps. This then serves as a spatial baseline for the purposes of planning, as well as to protect the project from illegitimate claims for compensation.

2.12.5 Compensation Characterization

2.12.5.1 Eligibility Criteria

One of the main objectives of a CRP should be to minimize social disruption, thus limiting the number of people who will be eligible for compensation and resettlement. Compensation should be given only to those who are eligible to be paid. Compensation should be paid to an owner, occupier or a person who has a legal right or interest on a piece of land that is being acquired or affected.

Eligibility criteria should be in accordance with the member state compensation regulations and laws.

2.12.5.2 Cut-Off Date

In order to ensure that there are no endless claims for compensation, it is crucial to establish a cut-off date beyond which no application for payment would be honoured. The cut-off date should be the day after the survey has been done and properties identified. Those who move in an area after the cut-off date are not eligible for compensation or other forms of assistance.

The cut-off date should be agreed by the Local Authorities and communicated to all persons who may be directly or indirectly affected by the road project.

2.12.5.3 Methods for Valuation of Affected Assets

The valuation of affected assets should be based on the market value of any land and unexhausted improvement. There are different methods that are normally used in assessing market value. The comparative Method is based on actual recent sales of similar property. That means the valuation will be based on the average prices of properties in that area. The average price of properties will be the one used to determine how much one should be paid as compensation.

In summary valuation of property for compensation should cover the following:

- Market value of the real property based on the average price of land at each specific area along the road in question, bearing in mind that land prices differ according to location.
- Disturbance allowance based on the principle of “the value of the estate multiplied by the rate of interest prevailing and payable to fixed deposits by commercial banks”.
- Transport allowance which is the actual cost of transporting twelve tons of luggage by rail or road within 20 km from the point of displacement.
- Accommodation allowance based on market rent for 36 months. These can be determined based on actual rents stated by property owners, although further investigation may be necessary to verify reliability.
- Loss of rental income restoration, based on loss of rental income for 36 months rent per tenant.
- Loss of profits is calculated on the basis of net monthly profits of the business carried out on the land, for a period of 36 months.
- Loss of wages, equivalent to payment in lieu of wages while rebuilding.

2.12.5.4 Estimated Cost of Compensation and Relocation

The cost of compensation and relocation is comprised of costs of the various assets that are lost, as well as loss of income, as per the valuation method adopted. These have been described above. In addition, there are other costs associated with relocation. Hence in calculating the total cost of compensation and relocation, the following are included:

- Compensation for land (in cultivation, being prepared for cultivation and cultivated the previous year);
- Compensation for structures and buildings (both permanent and temporary structures that will be/have been abandoned because the PAPs have been relocated);
- Compensation for crops (annual and perennial);
- Compensation for trees (shade trees and trees of economic value, either for subsistence or cash crops);
- Compensation for sacred sites (tombs, burial sites, ritual sites);

- Accommodation (loss of rent, or rent payable during relocation);
- Income restoration (loss of income from crops, business);
- Transport allowance
- Disturbance allowance (based on prevailing interest rates at commercial banks);
- Monitoring costs (for monitoring during, as well as after, resettlement);
- Foregone opportunity costs, such as cost of commuting;
- Contingencies (to cover unforeseen eventualities and associated expenses);
- Other coasts (labour, assistance in caring for small children, tending fields, construction materials or food during the resettlement process.

2.12.6 Compensation and Resettlement Requirements

2.12.6.1 Compensation and Resettlement Preferences

It is very important that persons who are going to be displaced be given options with regard to compensation, resettlement assistance and livelihood restoration. They may also have their preferred requirements which should be taken into consideration.

In terms of compensation, there are various ways in which payments can be made: in kind, in cash, by cheque, as a lump sum, in instalments, etc. However, some of these methods may not be acceptable to or convenient for the affected persons. During the public consultations with the PAPs, they should be asked what their preferred means of payment and how this should be executed.

2.12.6.2 Resettlement Assistance

PAPs may request various forms of assistance during the compensation and resettlement process, either from the road authority in a member state or the village/ward administrations. They may need assistance to prepare the land on which they will be resettled. They may require construction materials or labour to build their houses, or someone to look after their children while they move to their new homes. In the event that they must move to locations that are very far from their current abodes, PAPs may need assistance to assimilate into their new neighbourhoods (although this situation is unlikely to arise in the rural context, it may well be a concern in urban areas).

Vulnerable groups will require special attention during the compensation and resettlement process, and the CRP should ensure that their requests and needs are specifically addressed.

2.12.6.3 Sites of Cultural, Traditional, Religious and Historical Importance

In some cases, sites that have cultural, traditional, religious, historical or even personal importance may be affected by the proposed road project. For example, a graveyard or a site where traditional rituals are performed may lie within the new alignment. If these locations cannot be avoided by adjusting the road alignment, then discussions will have to be held with the local communities (including the traditional priests if sacred sites are involved) and the Ministry responsible to decide whether, how and where the site in question can be moved to. (Ideally this issue will have been highlighted during the social impact assessment during the EIA study, and resolved at a much earlier stage).

If a traditional, cultural or sacred site will be affected by proposed resettlement sites, this should have been highlighted during public consultations, and alternative relocation sites will have to be proposed.

2.12.7 Impacts of Resettlement

2.12.7.1 Environmental Impacts

Relocation involves the identification of land for resettlement. This may be virgin land (sometimes pristine forest or woodland) or it may be land that has previously been cultivated or otherwise used. Resettled communities also require services such as water supply and sanitation, electricity and telephones, as well as firewood. Their day to day activities may impact on their immediate environment and on natural resources in a number ways.

Each potential relocation site will have its own environmental issues. An assessment of the impacts on the environment, as well as those caused by the environment, should be assessed before relocation takes place, because the assessment may indicate that the location is not acceptable either in environmental or social terms. Depending on the significance of the impacts and how well they can be managed, alternative relocation sites may need to be identified.

Examples of the types of environmental impacts resulting from the relocation of project affected people include:

- Deforestation and de-vegetation leading to soil erosion and reduced productivity , as well as reduced capacity of water catchments;
- Loss of biodiversity in areas of where species of conservation significance exist;
- Intensified farming practices, leading to depletion of soils, and in the case of livestock farming, compaction of soils and overgrazing;
- Pressure on water sources due to increased demand for water by resettled persons;
- Contamination of water sources due to lack of proper sanitation facilities, leading to an increase in water-borne diseases, consequently affecting the health of the local communities and thereby productivity;
- Pressure on fuel sources (wood) due to increased demand for fuel wood by resettled persons;
- Increased amounts of solid wastes where no provision exists for collection and disposal, which could also lead to contamination of soils and water sources;
- Impacts on the health of the communities due to contamination of land and water as a result of previous land uses.

Hence some general environmental considerations to be taken into account during the relocation process should include:

- Relocation sites should not be located within or near water catchment areas or water sources, in riparian land, or wetlands, within or adjacent to forest reserves or virgin woodland.
- Relocation sites should not be located on land with gradients greater than 4% in order to minimize soil erosion. Soil conservation methods (such as terracing) should be employed where possible.
- Clearing of land should be carefully supervised so that only the land that is required for the purposes of resettlement is disturbed. All cleared land should be replanted as soon as possible to minimize soil erosion.
- The PAPs that are resettled should be provided with appropriate sanitation and solid waste disposal facilities.

2.12.7.2 Social Impacts

Various social impacts can also arise from relocation and resettlement. The predominant agricultural systems within the rural areas of East African Community are shifting cultivation and small holder mixed farming, based on rain fed cultivation. Typically, this involves clearing of irregular plots at some distance from the village by cutting and burning off trees, bushes and shrubs prior to tilling with the hoe. Plots are cultivated for one or two years, then left to recover to woodland fallow for five or more years. The size of land holding varies throughout the country, but the capacity to cultivate is governed mainly by availability of family and friendly labour. Should people be moved away from relatives and friends, then this supply of labour will no longer be available to them or at least not as easily available.

2.12.8 Implementation of the CRP

There are a number of activities that need to be undertaken before the CRP is actually implemented. These include;

- Establishing the roles and responsibilities of all stakeholders involved in the implementation of the compensation and resettlement process so that each party is clearly aware of the obligations and deliverables.
- Awareness creation through continued consultations with the PAPs
- Mobilisation of organisations that will be involved in the C&R process.
- Identification of land for resettlement
- Conduct environmental assessment of the proposed relocation sites to ensure that adverse impacts on the biophysical and social environments of the sites are avoided or minimized
- Confirmation of the PAPs and identified affected structures/properties.
- Confirmation of compensation rates

2.12.9 Grievances and Conflict Resolution

Experience the world over of dealing with issues of compensation and resettlement arising out of involuntary resettlement is replete with grievances among project affected people. Grievances arise mainly due to the rates of compensation paid, eligibility criteria and location of resettlement sites.

In normal circumstances, grievances are dealt with either statutorily through courts and tribunals, or administratively using Government or traditional Institutions. Using the courts in determining grievances related to compensation and resettlement is not the best option as it is tedious, costly and lengthy.

As there is no universal model on how to provide for grievances redress and conflict resolution related to compensation and resettlement, in some instances resolutions may be achieved through the project management team, local civil administration and other acceptable means of mediation or traditional institutions of dispute resolution.

2.12.10 Monitoring, Evaluation and Reporting

2.12.10.1 Performance Monitoring

The purpose of monitoring should be to assess performance of the implementation of the compensation and resettlement plan, in terms of the disbursement of compensation monies, the physical progress of resettlement and rehabilitation activities and the public consultation process. Payment of compensation is the most sensitive and therefore the most important of these.

2.12.10.2 Evaluation

The overall effectiveness of the CRP with respect to meeting the needs of the PAPs should be evaluated. This should be done by an independent third party commissioned by the road authority of a member state.

Evaluation should establish whether efforts to restore then living standards of the affected population have been properly executed. It should also verify the results of performance monitoring and identify adjustments to the C&R implementation process as required.

2.12.10.3 Community Participation in Monitoring and Evaluation

The participation of the affected people in performance monitoring should also be necessary. The PAPs should elect their representative to participate in the monitoring of the implementation of the CRP. They should also be involved in the identification of indicators for monitoring purposes and for the collection of relevant monitoring data.

During evaluations, participatory meetings with the PAPs will aid eliciting the required information in order to appraise the success of the process to date. The cooperation of the local authorities' leaders is crucial during these evaluations. An example of a checklist that could be used by monitoring agencies to check the progress of the CRP and its implementation is provided in appendix 28 and appendix 29 shows the framework for CRP Reporting Format.

3 GENERAL ENVIRONMENTAL PROTECTION AND MANAGEMENT FOR ROAD

This chapter describes the general environmental protection and management once the road is in place and operational. The idea is to have guidelines that should be followed for day to day environmental management activities of road facility.

3.1 Roles and Responsibilities

The Ministry responsible for road sector in a member state should establish a Sector Environment Section to comply with the Environmental Best Management Practices and Standards as stipulated in the protocol for environmental and natural management.

The general functions of the road sector environment Section in a member state should be in charge of environmental issues of a member state in a road sector, but the specific functions of the Road Sector Environment Section should be to:

(a) provide inputs to the Ministry responsible for a road sector in a member state to develop sustainable development strategy for the road sector, including policies and plans to implement the strategy;
(b) disseminate information regarding environmental protection and management within the road sector;
(c) liase with environmental entities, including participating in the technical Advisory Committee on environmental assessment established by the environmental management body of a member state; and
(d) supervise and coordinate the implementation of environmental regulations.

3.2 Minimum Environmental Quality Standards Applicable to Road Works

For the purpose of environmental regulations, the minimum environmental quality standards applicable to roads works should be in relation to:

(a) Water quality;
(b) Discharge of effluent;
(c) Air quality;
(d) Control of noise and vibration pollution;
(e) Sub-sonic vibration;
(f) Soil quality;
(g) Control of noxious smells;
(h) Light pollution;
(i) Electromagnetic waves and microwaves;
(j) Hazardous substances and materials; and
(k) Any other environmental quality standards.

Additional environmental standard specifications in a member state deemed necessary should apply.

3.3 Environmental Considerations for Road Development and Maintenance

The location, alignment and grade of roads to be constructed should be approved by the road authority of a member state.

Roads development and maintenance in a member state should be conducted in such a manner as to facilitate the growing of natural vegetation and to accommodate proper drainage and prevent soil erosion.

The road authority in a member state should be responsible for restoring areas affected by road development to their original contours after completion of the road project, including working zones, temporary alignments, borrow areas, quarry sites, camp sites and the like.

3.4 Soil Erosion Protection

The road authority in a member state should develop a suitable schedule of proposals for temporary and permanent soil erosion control measures at the commencement of the contract and should submit such schedule on demand to the supervising engineer who may give appropriate directions.

The road authority in a member state should take reasonable steps to prevent soil erosion that may adversely affect road construction, damage adjacent properties, cause contamination of adjacent streams and other watercourses, lakes, ponds, swamps or other areas of impoundment. Soil quality standards are in appendix 23.

3.5 Vegetation Protection

It should be the duty of the road authority in a member state to preserve and protect trees and shrubs within the road reserve or area which does not necessarily require removing for the road works.

Vegetation which is damaged or injured beyond repair or treatment should be restored early in the following planting season with the same type of species or other approved species suited to the environment.

3.6 Liquid and Solid Waste Management

The road authority in a member state should prevent the entrance or spillage of solid matter, contaminants, debris, refuse garbage, cement, concrete, sanitary waste, radioactive substances, oil, petroleum products, aggregate, processing failings, minerals salts, thermal pollution and other pollutants and wastes into any stream, dry or flowing water sources, wetlands, lakes, sea, underground water sources or any other water bodies.

Where it is necessary to discharge waste waters from aggregate processing, concrete batching or other construction operations into streams, water sources or other surface waters, the road authority in a member state should use turbidity control methods such as setting ponds, gravel filter entrapment dikes, approved flocculating processed which are not harmful to species, re-circulation systems for washing aggregate or other approved methods.

The road authority in a member state should comply with all applicable laws orders and regulations as well as water quality standards concerning the control and abatement of water pollution, and should compensate for polluted water sources and provide the consumers affected by pollution with clean drinking water transported through pipes or otherwise from unpolluted sources.

The road authority in a member state should ensure that solid and liquid waste generated during road works is properly collected, controlled and disposed off.

All waste water or sewage produced should be directed by the road authority in a member state to a soak pit or other dispose areas constructed in accordance with local government regulations applicable in the area relating to disposal methods for such waste or sewage.

All servicing of equipment, plants and vehicles should be done at a road contactor workshop which should be equipped with secure storage areas for fuel oils and other fluids to avoid uncontrolled spillage.

Whenever servicing of any equipment plants or vehicles should be done outside a workshop, it should be conducted at such appropriate locations as to avoid spillage and contaminations of a stream or other water courses.

Any spillage occasioned by road contractor operations should be cleaned up as soon as possible by either burning at a central disposal area or disposing off at a site duly approved by the supervising engineer.

On completion of the road works the road authority in a member state should remove all plant facilities, temporary constructions, rubbish, un-used materials, concrete and other similar materials.

On completion of the road works, the road contractor shall dispose off or clean up in a manner approved by the road authority any residue deposited on the ground from the washing out of transit mix trucks or any similar concrete operations. The road contractor should burry the approved materials as prescribed.

Possible alteration or relocation of utilities connected with road works should be made in such a way as not to cause negative impacts on the environment, whether placed within or outside the road reserve.

Transporters and passenger vehicles should provide solid waste bins in their vehicles and should only disposal off the same in the designated areas for solid waste disposal.

There should be rest centers where among other things, toilets should be provided to enable the passengers and drivers respond to both short and long calls. The water quality and discharge of effluents standards are appendices 21 and 24 respectively.

3.7 Atmospheric Emission Protection/Management

The road authority in a member state should utilize practicable methods and device to control, prevent and minimize atmospheric emissions or discharges of air contaminants.

The road authority in a member state or contractor concerned with roads works should not operate equipment and vehicles which give off excessive emissions of exhaust gases due to poor engine adjustments or other inefficient operating conditions until corrective repairs or adjustments are made.

Burning of wastes materials from road works, such as tyres, plastic, rubber products, bituminous products, outdated equipment, clearing of vegetation and other materials should be avoided and the road authority in a member state or contractor concerned with road works should dispose off waste materials by appropriate methods. Air and emission quality standards are in appendix 20.

3.8 Air Pollution Control

The road authority in a member state should ensure that any undertaking of the road works is in compliance with the applicable laws and regulations pertaining to the prevention and control of air pollution.

The road authority in a member state performing road works should take all reasonable measures to reduce emission of dust and to prevent dust from damaging crops, orchards, cultivated fields or cause nuisance to people in the areas surrounding or approximate to the road works. Air and emission quality standards are in appendix 20

3.9 Noise Protection

The road authority in a member state should comply with the applicable laws and regulation pertaining to the prevention and abatement of excessive noise in any undertaking of road works.

The road authority in a member state performing road works should supply its employees with such ear protection gear such as the supervising engineer may require.

Blasting operations, use of jackhammers, pile driving, rock crushing or other operations producing high intensity impact noise may be performed at night if the road authority has approved it in advance. Noise standards are in appendix 22.

3.10 Lighting Management

The road authority in a member state should direct all stationary floodlights downward at an angle lower than horizontal and such floodlights should be shielded so as to avoid or minimize nuisance to surrounding areas.

The lighting erected on the road work sites by the road authority in a member state should not be directed to any residence nearby.

3.11 Historical Site Protection

The concerned road authority in a member state should upon discovery of any site or item of scientific, historical, prehistorically or archaeological significance notify the supervising engineer forthwith.

The road authority in a member state upon receiving the information on any discovery, should promptly take actions to protect the site or item and inform the responsible ministries.

The road authority in a member state should take reasonable precautions to avoid damaging artefacts or fossils during excavations in the course of road works.

3.12 Management of Hazardous Substance

The responsible use of pesticides, toxic or other hazardous substances for road works should comply with relevant legislation on hazardous substance.

Except with the permission from the relevant authority, the road authority in a member state should not import, store or handle hazardous compounds or substance for use in the road works.

3.13 Land Tenure Management

The road authority in a member state undertaking road works should enter into a written agreement with every owner of land on the use of property adjacent to the relevant road reserve or facilities inside or outside the road reserve so far as affecting the location, extent and the use of borrow pits, quarry sites, haul roads, construction roads, paths and other features.

A borrow pit or quarry site should be fenced off from people, livestock and wildlife and relevant signs should be erected by the road authority in a member state.

After completion of the road works, borrow pits, quarry sites, camp sites etc should be reinstated, unless otherwise agreed upon with the owner of the land.

3.14 Blasting and Explosive Management

Only a person with adequate experience in blasting who possess a blasting certificate acceptable to the supervising engineer may be employed by the road authority a member state to use explosives in the course of and for the purposes of road works.

The purchase, transportation, storage, handling and use of explosives should be according to the laws and rules governing explosives. The road contractor should be liable for any injury, damage, loss, inconvenience and annoyance to persons, damage to adjoining structures, animals and property resulting from the use of explosives. Environmental standards for vibration and electromagnetic waves are in appendices 25 and 26 respectively.

3.15 Accident and Transportation of Materials

The road contractor should immediately notify the road authority in a member state officially within twenty four hours concerning any accident occurring on the site or off side during the operations. Arrangement should be made by the road contractor to ensure transportation of materials in vehicle which do not cause spoilage and which are secured properly.

3.16 Compensation Arrangements

The road authority in a member state should make arrangements with the local authorities and owners of the land where roads works are conducted and should pay the cost of compensation.

3.17 Contractors Employees Protective Gears

The road authority in a member state should ensure that any contractor or person concerned with the execution of roads works provides his employees with proper personal protective gears.

3.18 Environmental Management Issues into Contracts

The road authority in a member state should be responsible for the incorporation of relevant environmental management issues into contracts of contractors or any other persons concerned with execution of road development and maintenance.

3.19 Reporting

Every road authority in a member state has the responsibility of keeping records of environmental assessment which is carried out.

The road sector environment section should submit a bi –annual state of the environment reports to the director of the Environmental Management body of a member state for monitoring and checking.

The road authority in a member state should submit bi-annual environmental and social monitoring reports to the relevant environmental monitoring organization within one month from the end of the preceding period.

4 APPENDICES

Appendix 1: List of Environmental Management Activities for Each Project Phase

ROAD PROJECT PHASE	ENVIRONMENTAL MANAGEMENT ACTIVIT
Project planning/pre-feasibility phase	• Registering the project: describing and classifying the project; • Preparing project brief to be attached to the registration form; • Participating in the initial site inspection visit and coordinating with project team members; • Screening projects early in the project cycle to identify salient environmental parameters of the proposed road works and to assess the sensitivity of the receiving environment (screening to be carried out by the NEMC); • Identifying alternatives to the proposed project; • Scoping the environmental study; • Writing terms of reference (ToR) for the environmental expert.
Feasibility study/preliminary design phase	• Obtaining consulting services for the EIA; • Conducting and overseeing the EIA; • Analyzing for significant environmental impacts; • Conducting consultations with the public, as required; • Incorporating results of the EIA into the project design and implementation process through mitigation measures; • Proposing mitigation measures; • Drafting Environmental Impact Statement (draft EIS) • Preparing draft Environmental Management Plan (EMP) as part of the draft EIS; • Submitting draft EIS to the National EMC for review; • Reviewing draft EIS by the National Environmental Management body of a member state and its Technical Advisory Committee (TAC); • Public hearing, as needed (to be carried out by National Environmental Management body of a member state); • Commenting on the draft EIS.
Detailed design phase	• Incorporating results of the EIS into the project design and implementation process through mitigation measures; • Finalizing based comments from the National Environmental Management body of a member state and submission of final EIS to the National Environmental Management body of a member state; • Reviewing and refining the designing mitigation measures; • Preparing a Compensation and resettlement plan (CRP), as needed; • Preparing an Emergency Plan, as needed; • Updating the Environmental Management Plan (EMP), as needed • Preparing a project monitoring programme; • Preparing budgets for the required mitigation measures as input to the Bill of Quantities (BoQ); • Obtaining EIA certificate from the DoE.
Contract preparation and contract tendering phases	• Writing the required contract specifications/conditions to implement environmental management procedures; • Reviewing tenders;

	• Performing an assessment of the institutional requirements of the EMP; • Strengthen stakeholder institutional capabilities to perform environmental management activities as required;
Construction, supervision, and monitoring phases	• Following up to ensure that the contactor has assigned an appropriately qualified supervisor; • Following up to ensure the mitigation measures, conditions and specifications are fully implanted during construction as per the specifications in the EMP; • Monitoring specific environmental impacts and effectiveness of mitigation measures; • Resolving problems, as encountered.
Traffic operation and road maintenance phase	• Evaluating and implementing remedial measures during road operation; • Conducting consultation with key stakeholders; • Incorporating lessons learned into future road project planning

Appendix 2- Environmental Registration and Project Brief Form

APPLICATION REFERENCE (TO BE FILLED BY THE NATIONAL ENVIRONMENT MANAGEMENT BODY OF A MEMBER STATE)	
Application reference number (registration number	
Date of submission	

PROJECT BRIEF

PART A: DETAILS OF PROPONENT (ROAD AUTHORITY IN A MEMBER STATE)		
Name of the proponent(person or firm)		
PIN No		
Address		
Name of contact person		
Telephone no.		
Fax no.		
Email		
PART B: DETAILS OF THE PROJECT		
B1. Proposed undertaking/development		
Title of project (general classification of undertaking)		
Is the project listed in the mandatory list?		Yes, "Construction, expansion or rehabilitation of new trunk roads'' Yes, "Construction, expansion/upgrading of roads, harbors, ship yards, fishing harbors, air fields, railways and pipelines'' No
Is the project listed in non-mandatory list?		Yes, Rural road" No
Description of road project	Type of road	Trunk road Regional road District road Feeder road City road Municipal road Access road
	Length of road project	……..km
	Width of road reserve	Existing road reserve:……..….m (total width) Proposed future road reserve:…….m (total width)
	Resource utilization (estimated quantities)	Bitumen/asphalt:tonnes Concrete:……..…..tonnes Steel:……..….tonnes Stone aggregate ……..….tonnes Gravel/sand:……..….tonnes Earth:……..….tonnes Other materials:……..……tonnes (specify which ones) Hazardous chemicals:……kg Explosives:……..….kg
	Are new borrow pit(s)	Yes. How many:…….

	to be opened in an environmentally sensitive area?	Where:…… No
	Are new quarry(ies) to be opened in a sensitive area	Yes. How many:……. Where:…… No
	Are labor camps or temporary storage facilities to be established in a sensitive area	Yes. How many:……. Where:…… No
	Solid waste	What operations will generate solid wastes? What solid wastes will be generated? What quantities?
	Emissions to water	What operations will generate liquid wastes? What types of liquid wastes will be generated? What quantities
	Emissions to the air	What operations will result in emissions to the air (dust air pollutions)? What air pollutants will be emitted?
	Climate change	Emissions of carbon dioxide from construction works:……..tonnes Emissions of other greenhouse gases from construction works:……..tonnes
	Noise and vibrations	What operations will produce noise or vibrations? Estimated noise and vibration levels?
Scope of road Type of project	Type of project	New construction: ……..km Upgrading:……km Rehabilitation:……..km Maintenance:……km
	Size of labour force	
	Equipment and machinery	
	General description of project design	Description accompanied with drawings, maps and other relevant illustrations and documentation.

B2: Proposed site		
Location of project		Attach a site map at an appropriate scale Region(s):……. Municipality(ies):……..
Current zoning		
Directly affected cities		List number and names of cities that the road project is passing
Directly affected towns		List number and names of cities that the road project is passing
Directly affected villages		List number and names of cities that the road project is passing
Adjacent land use	Urban or peri-urban areas	……km
	Industrial areas	……km

	Agricultural areas	……km
	National parks	……km. name(s)……..
	Forest reserves	……km. name(s)……..
	wetland	……km
	Areas declared as watershed areas	……km
	Coastal areas	……km
	others	……km. specify;……..
	Crossing of major rivers	Yes. How many:……. Name(s) of rivers crossed:…… No
	Crossing of other water courses	Yes. How many and where:……. No
	Areas susceptible to erosion, landslides or any other tectonic movements	Yes. How many and where:……. No
	Areas with unique, rare, endangered or Threatened species	Yes. How many and where:……. No Uncertain
	Areas with potential tourism value	Yes. How many and where:……. No
	Hot springs	Yes. How many and where:……. No
	Green belts, parks or public open spaces in urban areas	Yes. How many and where:……. No
	Sacred areas	Yes. How many and where:……. No
	Burial sites and graves	Yes. How many and where:……. No
	Indigenous territories or reserves	Yes. How many and where:……. No
	Pollute areas	Yes. How many and where:……. No uncertain

B3. Infrastructure and utilities	
Permanent structures	List buildings and other permanent facilities to be erected, if any.
Temporary structures	List any temporary structures or facilities to be erected, such as camp sites, storage facilities,

		buildings in camp sites or at borrow pits etc.
Land required	Will land be required to width then the existing road reserve?	Yes. How much:……ha Where:…… No
	Will new land be required in connection with new alignments or realignments?	Yes. How much:……ha Where:…… No
	Will new land be required for opening of new borrow pits or quarries?	Yes. How much:……ha Where:…… No
	Will new land be required for camp sites?	Yes. How much:……ha Where:…… No
Water		Sources and quantities of water to be utilised
Power		Types sources and quantities of power to be utilised Diesel. Quantity:……litres, source(s):…… Electricity. Quantity:……..kWh, source(s):…… Others. Quantity:……..kWh, source(s):……..
Sewerage		Quantities and management of sewerages

B4. Potential environmental and socio-economic impacts

PROJECT PHASES/ACTIVITIES Scores: +: Positive impact -: Negative impact 3: Potential major impact 2: Potential intermediate impact 1: Potential minor impact Example: -3 = Potential major negative impact Note: The left column may be modified to reflect the actual activities of a road project			ENVIRONMENTAL COMPONENTS																							
			PHYSICAL										BIOLOGICAL						HUMAN							Other
			Air		Soil			Water					Habitation		Fauna		Flora										
								Underground		Surface																	
			Air quality	Noise	Soil quality	Drainage	Erosion	Quantity	Quality	Quantity	quality		Terrestrial	Aquatic	Terrestrial	Aquatic	Terrestrial	Aquatic	Socio-economic	Health/safety	Recreation	Community	Agriculture	Sites of interest		
Project activities	Site preparation	Deforestation																								
		Excavation																								
		Dynamiting/drilling																								
		Hydro-geology																								
		Solid and liquid waste disposal																								
		Organisation of the work site																								
	Construction and demobilisation of construction works	Deforestation																								
		Clearing																								
		Access roads																								
		Excavation																								
		Bridges/culverts																								
		Drainage/ditches																								
		Demolition																								
		Embankment																								
		Burning																								
		Burying																								
		Ford																								
		Dynamiting/drilling																								
		Borrow pits/quarries																								
		Hazardous wastes																								
		Spills/leakages																								
		Waste disposal																								
		Wastewater disposal																								
		Dredging																								
	Operation	Traffic operation																								
		Maintenance																								
		Deforestation																								
		Excavation																								
		Spills/leakages																								

B4. Potential environmental and socio-economic impacts			

B4. Environmental impacts (continued)	
For each potential major and intermediate negative impact identified (i.e. scores -3 and -2 in the table above), state how the road authority intend to manage that impact	
Potential major/intermediate impact (state the cause of possible impact and the nature of potential impact)	Management of impact (state what the road authority intend to do to avoid, minimize or reduce the potential impact)
Site preparation	
Construction and demobilization of construction works	
Operation	

B5. Other environmental issues	
Potential significant risks and hazards associated with the road project including occupational health and safety	State briefly relevant environmental studies already done an attach copies as appropriate

PART C: DECLARATION BY THE PROPONENT (ROAD AUTHORITY IN A MEMBER STATE)	
I hereby certify that the particulars given above are correct and true to the best of my knowledge	
Name:	
Position:	
Signature:	
On behalf of:	
Date:	

PART D: DETAILS OF ENVIRONMENTAL IMPACT ASSESSMENT EXPERT	
Name (individual/firm)	
Certificate of registration No.	
Address	
Telephone	
Fax	
e-mail	

PART E: DECICION OF THE NATIONAL ENVIRONMENT MANAGEMENT BODY OF MEMBER STATE (TO BE FILLED BY THE NATIONAL ENVIRONMENTAL MANAGAMENT BODY OF A MEMBER STATE)	
Sufficiency of project brief	Project brief sufficient Project brief not sufficient, proponent requested to supply additional information, date of reply to proponent: …….

Decision of the council	EIA not required no objection letter submitted by the National Environmental Management body of a member state on. Preliminary EIA required EIA required
Comments;	
Officer;	
Signature:	
On behalf of:(company name and seal)	
Date;	
1) If the project brief does not contain sufficient information, National Environmental Management body of a member state may request the applicant to provide further information.	

Appendix 3- Checklist on Environmentally Sensitive Areas and Ecosystems

1. Areas prone to natural disasters such as geological hazards, floods, rain storms, earthquakes, volcanic activity etc
2. Wetlands such as flood plains, swamps, lakes, rivers etc.
3. Water bodies characterized by one or any combination of the following conditions:
   a. Tapped for domestic purposes or brick-making
   b. Within the controlled and/or protected areas
   c. Which support wildlife and fishery activities
   d. Which are used for irrigation, agriculture or livestock grazing.
4. Mangrove swamps characterized by one or any combination of the following conditions:
   a. With primary, pristine and dense growth
   b. Adjoining mouth of major river systems
   c. Near or adjacent to traditional fishing grounds
   d. Which act as natural buffers against shore erosion, strong winds and storm floods.
5. Areas susceptible to soil erosion, e.g.:
   a. Hilly areas with critical slopes
   b. Unprotected or bare land
6. Areas of importance to threatened cultural groups
7. Areas with occurrence of rare, endangered or threatened species of plants and animals
8. Areas of unique socio-cultural history, archaeological or scientific importance and areas of potential tourism value
9. Polluted areas
10. Areas subject to desertification and bush fires
11. Coastal areas and marine ecosystems, including:
    a. Coral reefs
    b. Islands
    c. Lagoons and estuaries
    d. Continental shelves
    e. Beach fronts
    f. Intertidal zones
    g. Marine reserves.
12. Areas declared as national parks, watershed reserves, forest reserves, wildlife reserves and sanctuaries, sacred areas, wildlife corridors and hot-spring areas
13. Mountainous areas, water catchment areas and recharge areas for aquifiers
14. Areas classified as prime agricultural land or range lands
15. Green belts or public open spaces in urban areas
16. Burial sites and graves

Appendix 4- Template for Terms of Reference for an Environmental Expert

1. Introduction

[State the purpose of the ToRs, identify the development project to be assessed, and explain the executing arrangements for the environmental assessment.]

2. Background Information

[Describe the pertinent background. This should include a brief description of the major components of the proposed project, a statement of the need for the project, the objectives it is intended to meet, the implementing agency, a brief history of the project (including alternatives considered), its status and timetable, and a list any associated projects. If there are other projects in progress or planned within the region that may compete for the same resources, they should also be identified here.]

3. Objectives

[Summarize the general scope of the environmental assessment and discuss its timing in relation to the project preparation, design, and execution processes.]

4. EIA Requirements

[The EIA requirements are determined by the Environmental Assessment and Audit Regulations made under the Environmental Management Act. Identify any other regulations and guidelines that govern the conduct of the assessment or specify the content of the report, including e.g. the following:

- International treaties, national laws and/ or regulations and/ or guidelines on environmental reviews and impact assessments;
- World Bank Operational Directive (OD) 4.00, Annex A: "Environmental Assessment" and other pertinent ODs, Operational Manuals (OMs), Operational Notices (OPNs), and Guidelines.]

5. Study area

[Specify the boundaries of the study area for the assessment (e.g., water catchment area and land use), as well as any adjacent or remote areas that should be considered with respect to specific impacts (temporary infrastructure). The project could have different study areas corresponding to the level of impact.]

6. Scope of work

[Define the tasks. In some cases, the tasks to be carried out by a consultant will be known with sufficient certainty to be specified completely in the terms of reference. In other cases, specialized field studies or modeling activities will need to be performed to assess impacts. In that case, the consultant will define particular tasks in more detail after some period of assessment and will submit the detailed scope of work to the contracting agency for approval at a later date. Task 4 in the Scope of Work (below) is an example of the latter.]

SAMPLE TEXT ON SCOPE OF WORK:

The EIA study for project XXX includes, but is not necessarily limited to, the following tasks: **Task 1: Description of the proposed project and alternatives**

- Provide a brief description of the relevant parts of the project using maps of appropriate scale where necessary and include the following information:
- Project justification;
- Location;
- General layout, size, and capacity;
- Pre-construction activities;
- Construction activities;
- Schedule;
- Staffing and support;
- Facilities and services;
- Operation and maintenance activities;
- Required offsite investments;
- Life span;
- Provide a brief description of alternatives considered. At a minimum the do-nothing alternative must be included in the EIA study, i.e. the situation of not implementing the proposed project.

[Note: specify any other type of information relevant to the description of the project category.]

Task 2: Description of the environment

Assemble, evaluate, and present baseline data on the relevant environmental characteristics of the study area. Include information on any changes anticipated before the project commences. Modify the list below to show critical project information (e.g., information relevant to the project category and other project-specific information). Avoid compiling irrelevant data. Present environmental characteristics of the study area on a map to facilitate the understanding.

a) **Physical environment**: geology; topography; soils; climate and meteorology; ambient air quality; surface and groundwater hydrology; coastal and oceanic parameters; existing sources of air emissions; existing water pollution discharges; and receiving water quality.
b) **Biological environment**: flora; fauna; rare or endangered species; ecologically important or sensitive habitats, including parks or reserves, and significant natural sites; species of commercial importance; and species with potential to become nuisances, vectors, or dangerous (of project site and potential area of influence of the project)

c) **Socio-cultural environment:** population; land use; planned development activities; community structure; employment; distribution of income, goods and services; recreation; public health; cultural/ historic properties; tribal peoples; and customs, aspirations, and attitudes.

Task 3: Legislative and regulatory considerations

Describe the pertinent regulations and standards at international, national, regional and local levels that govern environmental quality, health and safety, protection of sensitive areas, protection of endangered species, sitting, and land use control. The ToR should specify those that are known and should require the consultant to investigate for others.

Task 4: Determination of the potential impacts of the proposed project.

Distinguish between positive and negative impacts, direct and indirect impacts, and immediate and long-term impacts. Identify impacts that are unavoidable or irreversible. Wherever possible, describe

impacts quantitatively, in terms of the affected environmental components (e.g., area, number) and environmental costs and benefits. Assign economic values when feasible. Characterize the extent and quality of available data, explaining significant information deficiencies and any uncertainties associated with the predicted impacts. If possible, develop ToR to conduct research to obtain the missing information. Identify the types of special studies likely to be needed for this project category.

The engineering plans should reflect "best practice" in alignment and construction to ensure that potential negative environmental impacts are minimized (e.g., through measures to prevent soil erosion risk, ensure proper drainage, and provide for waste disposal for cut and fill material and used oil. The EIA should verify that this is the case.

The EIA should focus on the potential for negative environmental and social impacts caused by:

- Planned and unplanned (spontaneous) in-migration of people;
- Clearing of forest lands for agriculture;
- Increased pressure on fuel wood, fodder, and water resources;
- Social disruption and conflict; and threats to woodlands and important wildlife species.

The EIA should also examine the potential for linear resettlement, as road projects usually involve linear patterns of land acquisition (e.g., highways, railways, canals, power transmission lines). An overview shall be provided of different groups of people and their cultural, ethnic, and socio-economic characteristics, and how they are likely to benefit and/ or be negatively affected by the project. Negative impacts may include, but not be limited to, physical relocation, loss of land or other physical assets, or loss of access to livelihood. The purpose of this screening shall be to minimise negative social impacts, both through the selection process and by providing inputs and guidance to the engineering designs.

In the case of land acquisition, a compensation and resettlement plan (CRP) should be prepared and implemented in accordance with the Compensation and Resettlement Guidelines for the Road Sector.

Task 5: Analysis of alternatives to the proposed project
Describe alternatives that were examined in the course of developing the proposed project and identify other alternatives, which would achieve the same objectives. The concept of alternatives extends to sitting, design, technology selection, construction techniques and phasing, and operating and maintenance procedures. Compare alternatives in terms of potential environmental impacts; capital and operating costs; suitability under local conditions; and institutional, training, and monitoring requirements. When describing the impacts, indicate which are irreversible or unavoidable and which can be mitigated. To the extent possible, quantify the costs and benefits of each alternative, incorporating the estimated costs of any associated mitigating measures. Include the ‘no project’ alternative to demonstrate environmental conditions without the project.

Task 6: Development of an environmental management plan to mitigate negative impacts and enhance positive impacts. The environmental management plan (EMP) focuses on three generic areas: mitigation measures, institutional strengthening and training, and monitoring. The emphasis on each of these areas depends on the context-specific project needs.

Mitigation measures
Recommend feasible and cost-effective measures to prevent or reduce significant negative impacts to acceptable levels. The must cover requirements in the design phase, site preparation, construction, demobilization of construction, and operation and maintenance of the road.
Quantify the impacts and estimate the costs of the mitigation measures. Consider compensation to affected parties for impacts that cannot be mitigated. The plan should include proposed work programmes, budget estimates, schedules, staffing and training requirements, and other necessary

support services to implement the mitigation measures.
The recommended mitigation measures must be specific and described in quantitative terms to a detailing level which allows for inclusion of the mitigation measures into the Bill of Quantities for the road project.

Describe residual impacts after incorporation/implementation of the recommended mitigation measures

Summarize the environmental impacts and mitigation measures using a strip map at the same scale as that of the road design.

Institutional strengthening and training
Identify institutional needs to implement environmental assessment recommendations. Review the authority and capability of institutions at local, provincial, regional, and national levels and recommend how to strengthen the capacity to implement the environmental management and monitoring plans. The recommendations may cover such diverse topics as new laws and regulations, new agencies or agency functions, inter-sectoral arrangements, management procedures, training, staffing, operation and maintenance training, budgeting, and financial support.

Monitoring Plan
Prepare detailed arrangements to monitor the implementation of mitigation measures and the impacts of the project during construction and operation. Include in the plan an estimate of capital and operating costs and a description of other required inputs (e.g., training and institutional strengthening).

Task 7: Assist in interagency coordination and public/ NGO participation
Assist in coordinating the EIA with other government agencies, in obtaining the views of local NGOs and affected groups, and in keeping records of meetings, other activities, communications, comments, and their disposition. The ToR should specify the types of activities (e.g., interagency scoping session, environmental briefings for project staff and interagency committees support to environmental advisory panels, or public forums).

7. Reporting

[State the reporting requirements]

SAMPLE TEXT ON REPORTING:
The EIS should be concise and limited to significant environmental issues. The main text should focus on findings, conclusions, and recommended actions supported by summaries of the data collected and citations for any references used in interpreting data. Detailed or un interpreted data are not appropriate in the main text and should be presented in appendices or in a separate volume. Unpublished documents used in the EIA may not be readily available and should also be assembled in an appendix. The EIS should be organized in compliance with the requirements of the Environmental Assessment and Audit Regulations, 2005, and according to the following outline:

- Executive summary;
- Policy, legal, and administrative framework;
- Description of the proposed project and alternatives considered;
- Description of the existing environment;
- Significant environmental impacts and mitigation measures;
- Analysis of the alternatives;
- Emergency plan;
- Environmental management plan (including monitoring plan);
- Interagency and public/NGO involvement;
- List of references;

- Appendices:
- Terms of Reference;
  - List of the EIA team;
  - Records of Interagency and public/ NGO communications;
  - Data and unpublished reference documents.

X hard copies and one electronic copy (in MS Word 2007) of a preliminary draft EIS should be submitted to the [name of road authority] for comments.

Upon receipt of the road authority's comments, the environmental expert shall prepare the draft EIS.

Y copies and one electronic copy (in MS Word 2007) of the draft EIA should be submitted to the [name of road authority].

Upon receipt of possible comments by the environmental authority, the consultant shall incorporate the comments of the environmental authority into and finalize the EIS.

Y copies and one electronic copy (in MS Word 2007) of the draft EIA should be submitted to the [name of road authority]. Photos, tables, maps and the like must also be submitted in original and appropriate electronic versions.

8. Consulting team

[Identify the expertise to include on the EIA team. Environmental assessment requires interdisciplinary analysis. Members of the team could consist of people with the following specializations: rural sociology (in the case of rural roads); human geography; and/or terrestrial ecology (e.g., wildlife, plant, and conservation ecology).]

9. Schedule

[Specify dates for progress reviews, interim and final reports, and other significant events.]

10. Activity/time schedule

[Specify the duration of the assignment and include a time/activity schedule for the assignment.]

11. Other pieces of information

[Include here lists of data sources, project background reports and studies, relevant publications, and other items to which the consultant's attention should be directed.]

12. Quality assurance

[Include requirements to the environmental expert's quality assurance system and procedures, including the nomination of a qualified person who will be responsible for the quality assurance of the standard of work and performance of the environmental expert.]

13. Confidentiality and intellectual property rights

[Include conditions on confidentiality and intellectual property rights, as required.]

SAMPLE TEXT ON CONFIDENTIALITY AND INTELLECTUAL PROPERTY RIGHTS:

During the performance of the consultancy services or at any time after expiry or termination of the EIA study, the consultant shall not disclose to any person or otherwise make use of any confidential information which he has obtained or may in the course of this EIA study obtain relating to the consultant, the client or otherwise.

The intellectual property rights and the copyright of the work produced by the consultant belong to the [NAME OF THE PROJECT PROPONENT ORGANISATION].

Appendix 5- Checklist for Identification of Environmental Impacts

The following guiding list of issues may be applied for identification of environmental impacts of road projects. The list is not all-comprehensive, but addresses a number of the typical types of impacts that may arise from road projects.

Resource Utilization and Socio-economic Impacts

1. Is the local population living a basically traditional lifestyle? If so, is it important to consider how the project will affect people's use of local resources?
2. Will the project affect resources (e.g., drinking and washing water, marine or land food, fuel, medicines, building materials) that local people take from the natural environment?
3. Will there be additional demands on local water supplies or other local resources as a result of the project?
4. Will the project restrict people's access to natural resources at any time before, during, or after construction? If so, what plans are there to provide additional resources to meet increased permanent and temporary needs?
5. Will the project affect downstream users of resources, especially water resources? If so, how will those resources be protected?
6. Are future natural-resource-use opportunities being cut off? If so, what compensation will be offered?
7. Will the project affect land or water use, or require leases, or changes in tenure?
8. Will the project require resettlement of any residents?
9. Will the project result in construction workers or other people moving into or having access to the area? How many people? How will this affect the availability of local resources?
10. Will the project create jobs locally? If so, will this include work for local women?
11. Will the project provide safe reliable transport to and from the work place and a safe working environment?
12. Can some project outputs be targeted to meet the needs of special groups in the community (e.g., women, youths, old, or infirm people)?
13. Is the area culturally or archaeologically sensitive? Are rock shelters or caves present? Is the area named in stories? Is it a burial area?

Biophysical/ Landscape Impacts

1. Is the local vegetation mainly forest, mangroves, swamp vegetation, or farmland?
2. Will the immediate or 'downstream' effects of the project change the vegetation cover?
3. Will the project affect important species, habitats, or ecosystems in the area? Is the area environmentally sensitive or fragile? Check the list of environmentally sensitive environments for Tanzania?
4. Can construction areas be located away from sensitive ecosystems and on flat to very-gently-sloping land?
5. Are there areas of limestone karst or wetlands? If so, have special consideration been given to their management?
6. Will vegetation be removed or any surface left bare? If so, what will be the impact of clearance? Will sediments be prevented from entering streams?
7. Will the project affect coastal areas, wetlands, or swamps or have 'downstream' effects?
8. Will slope or soil stability be affected by the project (e.g., by using heavy machinery)?
9. Will a large land area or a high proportion of a community's land be affected?
10. Will quarries or borrow pits be developed or operated under the project?
11. Will the present landscape be altered (e.g., by rock or soil removal, spoil dumping, or timber removal)?

Projects in or near Forested Areas

1. Is the local vegetation mainly savannah, savannah woodland, tropical forest, tropical rainforest, or mangrove forest?
2. Are there important species, habitats, or ecosystems in the affected area (in the immediate area or 'off site') or is the area environmentally sensitive or fragile? (Check the environmental database if it is available.)
3. Are forested areas used as locally-important hunting areas?
4. Will vegetation be removed or any surface left bare? If so, what will be the impact of clearance and how will sediments be prevented from burying vegetation, entering streams, or reaching the shoreline?
5. Can construction areas be located so as to avoid disturbing local habitats?
6. Will the forest landscape be altered (e.g., by rock or soil removal, spoil dumping, or timber removal)?

Impacts on Water and Air Quality

1. Will the project generate waste products (including increased sewage or solid wastes)? Will waste products be disposed of locally? How will sewage be treated? How will solid waste be treated? How will rock or soil waste be treated?
2. Are there site-specific-erosion plans and sediment-control plans for the project area?
3. Will the project or its waste disposal affect the quality of local streams or the groundwater? What steps are planned to minimize sedimentation in streams and contamination of groundwater?
4. Will toxic chemicals (e.g., herbicides, tar, oils, paints, and other industrial chemicals) be used or disposed of in the project area?
5. Will hazardous substances (e.g., large quantities of fuels) be used or stored in the project area? What plans are there to contain these substances? How will fuel, oil, or other hazardous chemicals be delivered, transferred, and stored to prevent leaks from contaminating the soil, streams, limestone karst areas, or coastal zone?
6. Will heavy machinery create dust or noise problems or reduce safety for pedestrians, including children and old people? What plans are there to separate heavy machinery from residential areas or to minimize these impacts?
7. Will the batching areas (for concrete or bitumen) produce some waste and spillage? Will these and other construction sites be contained while in use and cleaned and rehabilitated after use?
8. Will there be serious dust problems in settled areas during project operation? What measures will be taken to reduce this impact?

Environmental Health, Natural Hazards, and Construction Hazards

1. Will there be a water logging problem at the site? What steps will be taken to control disease vectors, especially mosquitoes?
2. Is the soil and/or slopes naturally unstable and prone to erosion? What plans are in place to safeguard against soil or slope erosion? Is the road draining system sufficient to drain the road of current heavy rainfall episodes? Has possible future increase in rainfall amounts or intensities been taken into account in the design of the road drainage system?
3. Is the environment naturally unstable (i.e., in an area prone to coastal erosion, within a zone which would be affected by any rise in sea level, in an area of known earthquake or landslip activity, in an area prone to severe storms, floods, or droughts)? What plans are there to protect the development against these natural hazards? Will the presence of the development cause increased environmental damage should a natural hazardous event occur? If so, what environmental protection measures will be implemented?

4. Are safety measures in place to protect the workforce? Do all workers have the necessary safety clothing and equipment? Have workers been trained in the use of safety equipment?
5. Is there a contingency plan to deal with spills of hazardous chemicals (including oil products) in the project area?

6. Are fire-fighting and spill-clean-up materials / chemicals available for use at the site (e.g., water, sand, detergent, acid, or alkali)?
7. Are measures being taken to ensure safety to road users after project completion (e.g., speed bumps and adequate road furniture)?

Bridge Projects

In addition to the impacts that are associated with other infrastructure projects, there are special issues to consider for bridges.

(a) Single span no-pile bridges

1. Will bank vegetation, farmland, levee, or straight bank edges be disturbed? Identify bed and bank sediments clearly (e.g., as predominantly clay, sand or gravel). Note possibilities for erosion and collapse.
2. Are sediments likely to enter the stream system? Identify control methods.
3. Will there be a need for an access road or a temporary diversion? Consider the physical impacts of these structures and propose methods of rehabilitation after use.
4. Is there a risk of runoff draining onto farmland, resulting in flooding? If so, this should be addressed in the design.
5. Will containment structures block existing watercourses to farmland? If so, the design should address this as well.
6. Will there be temporary construction in or diversions of rivers? If so, all possible impacts in terms of bank erosion, sediment accumulation, and subsequent disposal of materials should be considered.

(b) Longer bridges with piling

1. Will the bridge pilings cause turbulence, sediment movement, and deposition and consequent bank and streambed erosion? This should be taken into account in planning.
2. Is there a risk of bank instability? For piles near riverbanks, there should be controls on bank stability and an assessment of the upstream and downstream impacts of any proposed river training structures.
3. Will there be any temporary construction works in the river, such as drilling and pile-driving works? If so, what will be the impact of these works on flows and on potential erosion? What steps will be taken to rehabilitate the river section when the works are completed?
4. Where are the sources of fill and concrete aggregate? These should also be assessed.
5. Are there any issues of noise or safe pedestrian access across the bridge and along the bank?
6. What type of wastes will be generated? For construction areas, all wastes should be controlled and contained (including sewage). Subsequently, the waste should be removed to an appropriate disposal site and the site should be rehabilitated. Methods to deal with any hazardous chemicals (including fuel and oils), the management of cement batching plants (including their location), and methods to control noise, dust, and runoff should be addressed.
7. What is the main composition of the stream channel (i.e., clay, sand, or gravel)? If it is sandy or gravely, describe methods that will be used to stabilize the bank at the construction site. If it is clayey, explain the methods that will be used to prevent bank erosion and consequent downstream changes and explain the methods to minimize sediment-induced turbidity.
8. Are there habitat corridors along the riverbank that need to be protected? What methods will be used to protect these ecosystems or habitats?
9. What is the land- and water-use in the immediate area? What resources of local or traditional importance will be affected by the construction? What arrangements have or will be made with the local communities to manage the impacts on these resources?

Appendix 6- Method of Determining the Intensity and Significance of Impacts

The magnitude of an impact indicates the distance or relative area over which an impact will apply and the proportion of the component that will be affected. This is a parameter in and of itself and also a parameter of the degree of perturbation. The magnitude may be:

Punctual: when the intervention affects only one component located inside the road reserve or very close to the project area;
Local: when the intervention affects several similar components located inside the road reserve or very close to the project;
Regional: when the intervention has some repercussions on one or more components located far from the project or when the intervention affects a 'region'.

The degree of perturbation assesses the magnitude of the modifications brought to the structural and functional characteristics of the affected component. Three degrees describe the magnitude of the perturbations:

High: when the intervention would lead to the loss or the modification of the whole component or the main characteristics of the component. The affected component would risk losing its identity;
Intermediate: when the intervention would lead to the loss or the modification of some characteristics of the component. The quality of the affected component would be reduced, but its identity would not be compromised;
Low: when the intervention would not lead to a significant modification of the characteristics of the affected component. The affected component would keep its identity and not suffer much deterioration.

The **environmental value** indicates the relative importance of the project-affected component and it reflects both intrinsic and social values. The intrinsic value is determined by experts, who will assess the interest in and the quality of the component. The social value shows the political, legal, and popular interests to protect or develop the environmental component.

The **impact intensity** expresses the relative importance of the consequences resulting from modifications to the environmental component. The intensity combines environmental value and degree of perturbation, as shown in the table, overleaf.

Grid to determine the intensity of an impact

Degree of perturbation	Environmental value			
	Very high	High	Intermediate	low
High	Very high	High	Intermediate	low
Intermediate	High	High	Intermediate	low
low	Intermediate	Intermediate	Low	low

The **duration** specifies the temporal dimension of the impact:

- Temporary, short-term impact: when the effects are felt during the construction period and the first 2 years after the end of the construction period;
- Temporary impact over an intermediate term: when the effects are felt between 2-20 years after the end of the construction period (20 years is the average life span of a road);
- Intermittent impact: when the effects are felt over a more or less regular cycle; an intermittent

impact may be distributed over time and it may be permanent or temporary;
- Permanent impact: when the effects are irreversible.

These criteria are integrated to determine the significance of the impact, as shown in the table, overleaf.

The results of this analysis are often presented in a summary table that describes and evaluates the impacts. An example is presented in Appendix 7. Such a table presents:

- Impacts for each project phase and activity;
- The number of the impact and its location;
- A description of the impact;
- The impact intensity, magnitude, duration/ frequency, importance, and nature;
- Specific measures to protect the environment;
- The level of the residual impact.

Appendix 7- Example of a Summary Table for Description and Evaluation of Impacts

Phase/ activity	Number and location	Description of impact	Intens-ity	Mag-ni-tude	Duration/ frequency	Sign-ific-ance	Nature of impact	Specific measures for environmental protection	Residual impact
Dynamiting	DY-H-27 km 1+000 to 1+200 km 2+700 to 4+940 km 5+250 to 5+570 km 5+960 to 6+080 km 6+290 to 6+860 km 6+980 to 7+290"	About 465,000 m^3 of rock will be dynamited; this will modify the profile of the soil. It could affect the security of the road users and the visitors to the Selous Game Reserve due to the risk related to the explosion. Noise from explosions could also perturb hunting activities in the Game Reserve.	Very high	Local	Temporary (short term)	High	Neg-ative	The contractor must have an appropriate warning system to alert road users to the use of dynamite. Vehicles must be stopped far enough from the explosion site. Near the territory of the Game Reserve, dynamiting must be carried out during specific time periods (e.g., when hunting activities are at a minimum).	Inter-mediate
Manage-ment of the surplus from excavation works	G-BH-15 km 5+900	About 150,000 m^3 of broken rock will be stockpiled in a special area within the Selous Game Reserve. This will entail clearing 3 ha of foresled land. Activities within Selous will be perturbed.	High	Local	Permanent	High	Neg-ative	The stockpile area shall be located at least 100 m from the road, so that it will not be visible from the road. The Game Reserve will be compensated. At the end of the project, the stockpile area will be covered with arable soil and re-planted.	Low

Appendix 8- List of Issues to be covered in an Environmental Impact Statement (EIS)

The environmental impact statement (EIS) should be prepared according to the following outline.

a) Cover page

The cover page should indicate relative to the proposed road project, the following:

- Title of the proposed road project;
- Location;
- Name of road authority (project proponent);
- Lead EIA study consultant(s);
- Contact addresses and telephone/ fax numbers;
- Status of the report (draft or final);
- Decision-making authority; and
- Date of submission.

b) Executive summary

This should be a non-technical section giving a brief and concise summary highlighting major findings and recommended actions. It must describe the legal status of the EIS. It should also present any regulatory procedures to which the report will be subject. The executive summary should be produced as a stand-alone document for use by high-ranked authorities.

c) Acknowledgements

d) Table of contents

The table of contents should list the:

- Major sections of the report, including the executive summary;
- Tables;
- Figures;
- Appendices;
- Abbreviations and acronyms; and
- References and bibliography

e) Acronyms and abbreviations

f) Introduction

This section should provide the background and the justification of the road project, the scope and limitations of the EIA study, the approach and methodology used, and the structure of the report. The section should be structured as follows:

- Project justification;
- Background to the study;
- Purpose and objectives of the study;
- Scope and limitations to the study;
- Approach and methodology used; and

- Structure of the main report.

The background information should also describe any related studies focused on land use planning, development, and engineering, as well as any new regulations affecting the project. The intent here is to outline the setting for the proposed project.

g) Policy, legal, and administrative framework

The relevant policies, legislation, and regulatory and administrative framework within which the environmental assessment was prepared should be briefly presented here. The environmental requirements of any co-financiers should be identified and described, whenever possible.

h) Project description

This section should give a concise description of the works to be carried out, including any off-site works involving construction camps, access roads, borrow pits, quarries, or asphalt plants.

i) Biophysical and socio-economic environment (baseline information)

This section should contain a description of the environment that will be affected in terms of physical, biological, socio-economic, socio-cultural, historical, and even political conditions. However, only those environmental components necessary to understand project impacts should be considered. Other on-going and proposed projects in the area should be described to predict any cumulative or synergistic impacts. A description of the built and visual environment should also be provided here. Baseline data should be presented on a map at a 1: 10000 scale.

j) Identification and analysis of impacts

The section should describe how beneficial (positive) and adverse (negative) significant impacts are expected to occur. Possible cumulative, synergistic, or antagonistic impacts should be considered.

The impacts should be described and analyzed for the construction and operation phases, respectively.

The impact analysis should use various indicators. The impacts should be evaluated against threshold values where they exist (e.g., water quality standards). In the absence of standards, impact ratings should be used based on prediction analysis and impact magnitude, extent, and duration.

k) Analysis of alternatives

The purpose of this section should be to compare various options to determine the most environmentally and socially desirable one. The analysis of alternatives should evaluate the merits of each alternative, including the no-project alternative. It is useful to present the results in a matrix format showing the potential effects of each alternative on the valued ecosystem components. Alternatives should also be presented on a map to facilitate the understanding of the project proposal.

The negative effects of the proposed project should be identified, as should the possible remedial measures and any residual negative impacts that cannot be mitigated. Positive effects should also be noted (e.g., less urban pollution due to a road by-pass) and enhancement opportunities should be explored.

A systematic comparison of the proposed project's design, site, and technological and operational alternatives should be conducted using these criteria: potential environmental impacts, capital,

recurrent costs, and suitability under local conditions. The final discussion should present the preferred design to which the remaining EA steps will be applied.

l) Mitigation measures and residual impacts for the selected alternative

The section should describe the environmental impacts of the selected alternative and the measures identified to mitigate the significant negative impacts, including all design measures. The residual impact of the selected alternative should be presented.

The description of mitigation measures should be divided into measures to be taken in the detailed design, construction and operation phases, respectively. The description of mitigation during construction may be further subdivided into preconstruction/site preparation, construction works, and demolition of construction works in order to present the timeline of the mitigation measures. The description of mitigation during operations may be subdivided into traffic operations and maintenance activities, as appropriate.

The section should also include cost estimates for the proposed mitigation measures.

Environmental impacts and mitigation measures need to be presented on a strip map, which is at the same scale as the detailed technical design.

The section should also include cost estimates for the proposed mitigation measures.

m) Environmental management plan

The environmental management plan (EMP) should contain:

- An analysis of the institutional capacity of the existing agency to deal with the environmental management of the project;
- A description of the proposed remedial measures;
- A monitoring plan for the construction and operational period;
- Construction guidelines that specifically address how the contractor will incorporate environmental considerations into the works.

n) Emergency plan

The Emergency Plan should describe potential major accidents that could affect the environmental component during the construction period and the measures needed to respond to these situations. The emergency plan should cover construction as well as operation activities, as applicable.

o) Environmental monitoring plan

The monitoring plan should contain a monitoring programme for the construction and operation phases of the project, including parameters to be monitored, frequency of monitoring, reporting requirements and responsibilities for monitoring.

p) Conclusion and recommendations

The section should highlight the study's key findings, conclusions, and recommendations. It should:

- Briefly discuss key issues;
- Summarize the major positive and negative impacts and their mitigation measures;
- Identify any serious risk associated with the project; and

- Identify any management and monitoring needs.

q) Reference/ bibliography

The section should identify and record any written material and reports used in the study.

r) Appendices

Appendices contain important information that does not fit into the main body of the report, such as:

- Photographs;
- Maps and drawings;
- Records of meetings, discussions, and interviews;
- List of people contacted during the study;
- Submissions by public groups;
- Information from unpublished documents (e.g., photocopies of letters, climatic data, or standard values);
- Terms of References;
- List of the EIA study team members;
- Relevant plans and special studies from the study area;
- Large data sets;
- Evaluation tables;
- Detailed EMP.

Appendix 9- Example of an Environmental Management Plan

The environmental management plan (EMP) should specify and describe:

A. The legislative and administrative framework for EIA in a member state;
B. Implementation arrangements for the EMP;
C. The environmental monitoring programme;
D. Reporting requirements; and
E. Cost estimates to implement the EMP.

A. Legal and administrative framework for EIA

Describe the key national legislation that governs environmental impact assessment in a member state and define the role of the key agencies responsible for road-sector environmental management.

Key national legislation:

Road authority in a member state:_____

B. Implementation Arrangements for the EMP

Mention the key agencies responsible for project execution and implementation.
This section should highlight the specific activities to be carried out by each agency.
Road authority in a member state_____
Activities:_____ Contractor/Consulting Company)_____
Activities: _____

All activities to be carried out by each agency should be presented in a summary table, as shown in Appendix 10. The EMP's organizational framework should be designed to evolve as the project moves from the pre-construction, to the construction, and to the operational phases.

EXAMPLE

1. Pre-construction and construction phases

The road authority in a member state will be the main project coordinator. It will implement the EMP and will play a key role in:

- The selection and management of a qualified national institute to conduct the design-and-construction-phase environmental monitoring;
- The selection and management of a qualified national or international organization to implement the project's EMP and RP, and
- Ensuring the implementation of the EMP's design and construction mitigation measures.

To ensure that the EMP, as well as all applicable national and local environmental regulations and the donors' environmental requirements can be met during the project preparation and implementation phases, assisted by the environment experts, will:

i. Review civil works contracts in accordance with the EIS and the EIA certificate;
ii. Coordinate the implementation of the EMP by the contractor(s), the local environmental authorities (e.g., districts), and the sectoral ministries;
iii. Monitor the implementation of the EMP and the civil works contracts in collaboration with local governments; and
iv. Prepare the semi-annual and annual environmental progress reports that will be part of the project progress report submitted to National Environmental Management body of a member state.

2. Operation

The project will establish links with the local governments through an agreement that ensures full stakeholder participation in decision-making on issues that affect the overall management of the land-use plan.

C. Environmental Emergency Plan

D. Environmental Monitoring Programme

The environmental monitoring programme will quantitatively measure the environmental effects of the project. The environmental monitoring programme will be implemented during the pre-construction, construction, and operational phases.

The monitoring programme may have a number of sub-programmes, each with a specific purpose, key indicators, and significance criteria. For example, a monitoring programme may have these sub-programmes:

- Sub-programme 1: Water supply monitoring;
- Sub-programme 2: Air quality monitoring;
- Sub-programme 3: Land-use plan monitoring.

Mitigation Monitoring

The mitigation monitoring will ensure that the mitigation measures are implemented effectively. A specific measure's "effectiveness" is defined as a "performance standard" within the EMP. If monitoring reveals that the mitigation measure is not effective, the project will need to either improve the existing measure or propose a new measure and performance standard.

The environmental specialist will monitor mitigation measures during the design and construction phases as part of the regular inspection programme. The executing agency (e.g., TANROADS Regional office) is responsible for monitoring the mitigation measures during the operational phase.

E. Reporting Requirements

The executing agency will provide the environmental monitoring reports during implementation as part of the semi-annual progress reports and annual reports.

Depending on the status of environmentally sensitive locations in areas where there are project activities, the National Environmental Management body of a member state will perform annual or bi-annual environmental reviews to ensure that environmental aspects of the project are reviewed alongside project implementation.

F. Cost Estimates to Implement the EMP

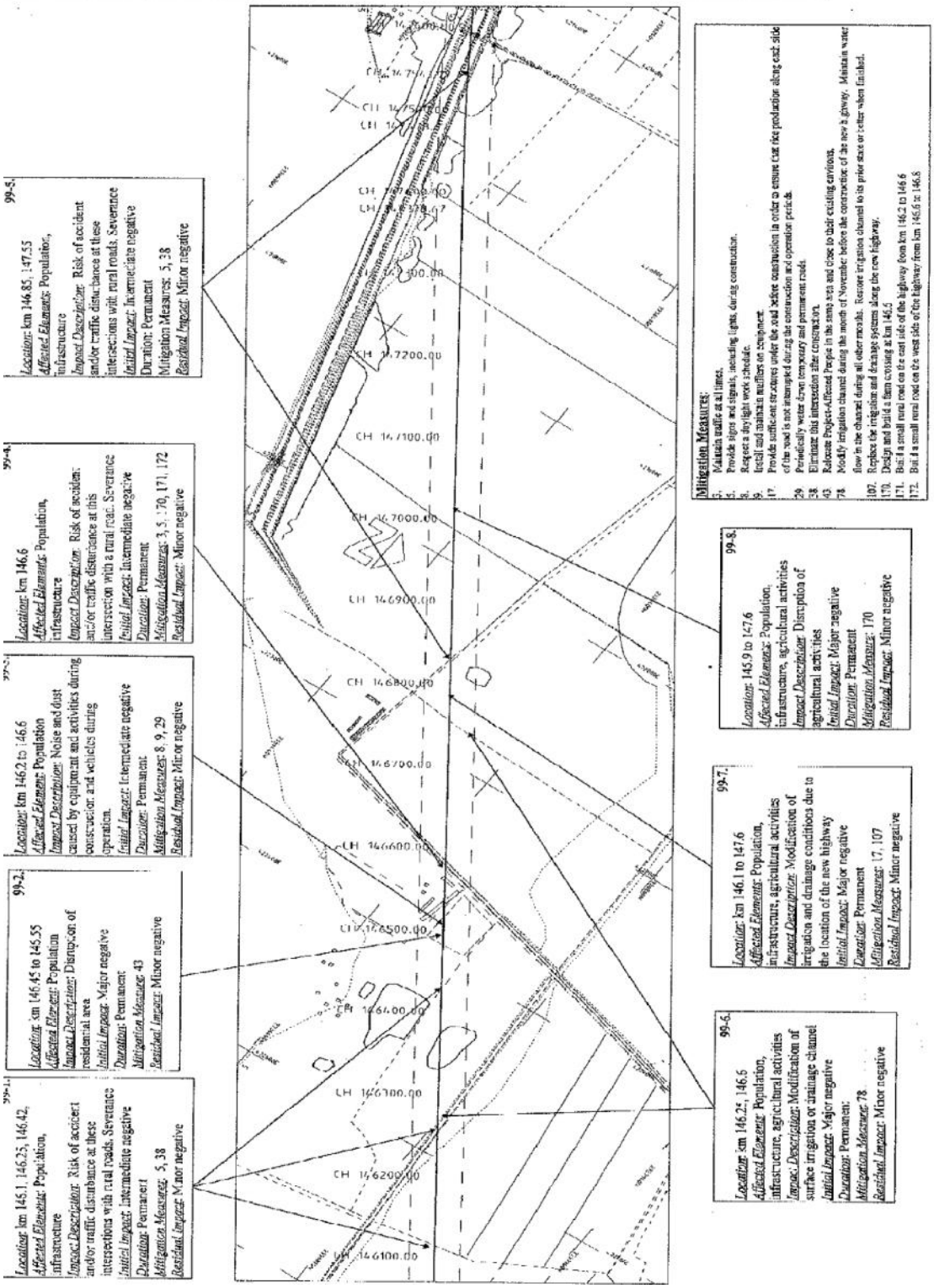
The EMP will specify the cost and the source of funding for each activity listed in the EMP. Implementation costs could emanate from:

- Training programme(s);
- Implementation of mitigation measures;
- Compensation;
- Monitoring activities.

Appendix 10- Example of a Summary Table of an Environmental Management Plan (EMP) – An example from Tanzania

Environmental impacts		Mitigation measures			
Impact	**Impact description**	**Mitigation description**	**Mitigation target**	**Implementation**	**Monitoring**
Resettlement	**Adverse impact: Mitigable** 511 households will be affected; 253 houses and 25 shops will be relocated before construction of the Mbeya–Chunya–Makongolosi road.	A $5 million resettlement plan was designed to meet ADB and Government resettlement policies.	All project-affected-persons (PAPs) will be fairly compensated according to the criteria in the Compensation and Resettlement Guidelines	TANROADS, Local government authorities (Mbeya Municipal Council and Chunya District Council) (see Compensation and Resettlement Plan for more details)	Will be selected by MOID DSE at a later date.
Land acquisition	**Significant adverse impact: Not mitigable** 10 ha of village livestock grazing land; 200 ha will be acquired during the expansion of the Mbeya-Chunya-Makongolosi road.	Land requirements were minimised through the participatory design of road canal alignments and the careful consideration of project alternatives for the road	No mitigation target, but the project should ensure that no more than 10 ha of village livestock grazing land and no more than 200 ha will be acquired by the project.	TANROADS (Mbeya Municipal Council and Chunya District Council) (see Compensation and Resettlement Plan for more details)	Will be selected by MOID DSE at a later date.
Vegetation destruction	**Adverse impact: Not mitigable** 22 ha of Kawetere Hill plantation forest will be cleared during expansion of the Mbeya–Chunya–Makongolosi road.	A $1 million compensation package will be paid to the plantation owners.	No mitigation target, but no more than 22 ha will be cleared; road construction activities will be confined to within the selected route corridor/ alignment.	Government of Tanzania through TANROADS (See Compensation and Resettlement Plan for more details)	MOID DSE in collaboration with NEMC

Appendix 11-Example of a Strip Map



Appendix 12- Environmental Impact Statement (EIS) Submission Form

SUBMISSION DETAILS	
Application reference number(registration number)	
Date of submission of draft EIS	

PART A: DETAILS OF PROPONENT (ROAD AUTHORITY IN A MEMBER STATE)	
Name of proponent(person or firm)	
PIN No.	
Address	
Name of contact person	
Telephone no	
Fax no	
e-mail	

PART A: DETAILS OF THE ENVIRONMENTAL IMPACT ASSESSMENT	
Title of the project	
Objectives and scope of the project	
Description of the activities	
Location of the proposed project	
Proposed environmental management plan	

PART C: DECLARATION BY THE PROPONENT (ROAD AUTHORITY IN A MEMBER STATE)	
I hereby certify that the particulars given above are correct and true of the best of my knowledge	
Name;	
Position;	
Signature;	
On behalf of;	
Date;	

PART D: DETAILS OF ENVIRONMENTAL IMPACT ASSESSMENT EXPERT	
Name (person or firm)	
Registration No.	
Address	
Telephone no	
Fax no	
e-mail	
PART E: DECICION OF THE NATIONAL ENVIRONMENT MANAGEMENT BODY OF A MEMBER (TO BE FILLED BY THE ENVIRONMENTAL MANAGEMENT BODY)	
Decision of the Environmental Management body	EIS accepted. Project recommended for EIA certificate EIS accepted. Project not recommended for EIA certificate EIS not accepted. Further information needed
Comments;	
Officer;	
Signature;	
On behalf of☹ company name and seal)	
Date:	

Appendix 13- EIA Certificate Forms

Based on an approved EIS, the Minister Responsible for the Environment will issue an EIA certificate.

EIA Certificate
Application Reference No…… Registration No……..

FOR OFFICIAL USE

ENVIRONMENTAL IMPACT ASSESSMENT CERTIFICATE

This is to certify that Ms

……of address…… …… has this day been granted an Environmental Impact Assessment Certificate for the proposed project/activity titled:

Which is located at:

…….…… This certificate shall remain in force during the whole lifecycle of this specific project unless henceforth revoked or suspended.
General and specific conditions and terms attached to this certificate are set out overleaf.
…….
Dated this……..day ……of 20……. Signature……..
Minister Responsible for Environment.

Conditions of certificate:

1. This certificate is valid for a period of …… time within which the project should commence) from the date thereof.
2. The Minister shall be notified of any transfer/variation/surrender of this certificate.
3. Observe all relevant national policies and legislation that guide this specific project throughout its life cycle.
4. Ensure safe disposal of all types of wastes (solid or liquid) in specified sites.
5. Ensure environmental sustainability by avoiding any form of pollution by using most viable management techniques.
6. Adhere to the Environmental Management Plan (EMP) and Monitoring Plan (MP) and constantly improve and update them by taking into account any new developments.
7. Constantly liaise with relevant authorities and consult stakeholders including local communities in case of any new development or changes as regards to implementation of your project plan or activities.
8. Adhere to all proposed mitigation measures as specified in the Environmental Management Plan contained in the Environmental Impact Statement.
9. Abide by all national social and environmental safeguard policies and standards and strive to maintain and constantly improve standards.
10. Prepare an Emergency and Contingency plan and put in place risk and safety measures.
11. Conduct periodic Environmental Audits and facilitate monitoring by relevant authorities.
12. Design and implement an internal Environmental and Safety Policy and Awareness Programme.
13. Prepare Annual Environmental Reports and any other reports requested by competent authorities and the government.
14. Obtain all other relevant permits.

Based on an application from the road authority, the Minister Responsible for the Environment may issue a certificate of variation of the EIA certificate.

Certificate of Variation of EIA Certificate

Application Reference No…… Registration No…….

FOR OFFICIAL USE

CERTIFICATE OF VARIATION OF ENVIRONMENTAL IMPACT ASSESSMENT CERTIFICATE

This is to certify that the Environmental Impact Assessment Certificate No…….. Issued on……. (date) to……..(name of individual/firm) of ……(address) regarding ……..(title of project) whose objective is to……... ……. ……(briefly describe purpose) located at……..……(locality and District) has been varied to……..……. ……. ……. ……. ……. ……(nature of variation) with effect from……(date of variation). Dated this……day ……of 20……. Signature…….. (Seal)

Minister Responsible for Environment.

Appendix 14- Form for Application of Variation of EIA Certificate

PART A: SUBMISSION DETAILS AND PREVIOUS APPLICATIONS	
Application reference number(registration number)	
EIA certificate number	
Previous amendments of EIA certificate	No previous application for variation of an EIA certificate. The EIA certificate was previously amended.

PART B: DETAILS OF PROPONENT (ROAD AUTHORITY OF A MEMBER STATE)	
Names of proponent(person or firm)	
PIN no.	
Business registration no	
Address	
Name of contact person	
Position of contact person	
Telephone no	
Fax no	
e-mail	

PART C: DETAILS OF CURRENT ENVIRONMENTAL IMPACT ASSESSMENT CERTIFICATE	
Name of the current EIA certificate holder	
Application no of the current EIA certificate	
Date of issue of the current EIA certificate	

PART D: DETAILS OF CURRENT ENVIRONMENTAL IMPACT ASSESSMENT CERTIFICATE	
Conditions in the current EIA certificate	
Proposed variation(s)	
Reasons for variation(s)	
Describe environmental changes from the proposed variation(s)	
Describe how the environment and the community might be affected by the proposed variation(s)	
Describe how and to what extent the environmental performance requirements set out in the EIS previously approved or project profile previously submitted for this project may be affected	
Describe any additional measures proposed to eliminate, reduce or control any adverse environmental impact arising from the proposed variation(s) and to meet the requirements in the Technical Memorandum on Environmental Impact Assessment Process	

PART E: DECLARATION BY THE PROPONENT (ROAD AUTHORITY OF A MEMBER STATE)

I hereby certify that the particulars given above are correct and true to the best of my knowledge and belief. I understand that the environmental impact assessment certificate may be suspended, varied or cancelled if any information given above is false, misleading, wrong or incomplete.	
Name:	
Position:	
Signature:	
On behalf of:(company name and seal)	
Date:	

PART E: DECISION OF THE NATIONAL ENVIRONMENT MANAGEMENT BODY OF A MEMBER STATE (TO BE FILLED BY THE NATIONAL ENVIRONMENTAL MANAGEMENT BODY OF A MEMBER STATE)	
Decision of the council	Recommendation to accept application and issue a certificate of variation of the EIA certificate Recommendation of reject application
Comments:	
Officer:	
Signature:	
On behalf of:	
Date:	

Appendix 15- Checklist of Environmental Issues to be considered in the Design of a Road

Environmental issues	Design issues	Comments
Erosion issues	a) Where is erosion observed? b) Does the survey information provide adequate information about the susceptibility of the area to erosion (e.g., are soil erodibility, vegetation cover, slope gradients, and degree of soil compaction noted)? c) Does the design address the cause of erosion and the erosion factors? d) How will embankments be protected from erosion? e) Have scour checks been placed in ditches with gradients between 2%-5%? Where soils are highly erodable, are scour checks needed at gradients even less than 2%? g) Has adequate erosion protection been provided for at drainage outfalls? h) What local materials are available for erosion protection? i) Can the special specifications outline how to plant the vegetation for erosion control (e.g., diagonal planting)?	
Water management issues	a) Is the hydrological information adequate to assess run-off regimes in the design area? b) Has the choice of infiltration factor taken into consideration vegetation cover, degree of soil compaction, and land use? c) Does the drainage design mimic natural drainage patterns? d) How are shifting watercourses, common in the flatter areas, accommodated? e) Is the alignment of wing walls and headwalls correct? f) Are the side drains adequate (e.g., in terms of dimensions)? g) Are the cross-drainage structures adequate to prevent damage to the road during normal flood events? h) Does the embankment design	

	accommodate the area's natural drainage system? i) Is the project located in an area where water accesses constrained? j) What compaction method works best in the project area? Where will the contractor obtain water for the Works? k) Were the real costs and benefits analyzed (e.g., the cost of hauling water long distances for compaction vs. the cost to the communities of having the road rapidly deteriorate?)	
Waste management issues	a) What type of solid or liquid wastes will the project generate? b) Can the volume of waste be reduced through reduce, reuse, or recycle initiatives? c) How will the solid and liquid wastes be managed? Where will the wastes be stored initially and where are the final disposal sites for each waste type? d) Have stakeholders agreed to the location of the disposal sites?	
Noise, air and vibration pollution	a) Was the level of dust, noise, and vibration pollution assessed for the construction and operational phases and for the road workers, users, and adjacent landowners? b) How will dust, noise, and vibration pollution be managed for each of the above stakeholders? (also see "occupational health")	
Damage to flora, fauna and to sensitive environments: depletion of natural resources	a) Will the alignment affect any protected areas, sacre areas, or sites of archaeological, historical, or cultural interest? b) Are there other sites that need to be avoided (e.g., swamps)? c) Will the proposed routing result in the unnecessary felling of trees or clearing of vegetation? d) Could the routing and design of the road be modified slightly to prevent the unnecessary loss of trees (e.g., shade trees)? e) How will the list of protected items be communicated to the contractor (will the information be incorporated into line diagrams and drawings or	

	will it be included in the Special Specifications)? f) Is gravel really required for the road works? What quality of gravel is required? Can marginal material be used to conserve gravel (gravel is a non-renewable resource)?	
Social issues (compensation issues and community assets)	a) Does the survey for the road alignment provide enough detail on the surrounding land use so that the road can be designed to reduce conflicts (e.g., will farmland be lost)? b) Has the community been informed about the upcoming project? c) Have their views been solicited and incorporated into the design? d) What process will be followed to obtain land for permanent works, temporary works, and diversions? e) Has the road been designed to reduce the extent of land and property acquisition? f) Can the road be re-routed around these? What structures will have to be removed?	
Damage to flora, fauna and to sensitive environments; depletion of natural resources	a) Will trees with economic or food-source functions (e.g., teak wood or fruit and nut trees) or plantation trees be affected? b) Will individuals or communities lose any assets? c) What compensation will be provided? How will this be agreed upon? d) What needs to be done to ensure that consensus is reached and compensation is available before construction starts? e) Is the compensation adequate? f) Will the sitting of borrow areas result in land use conflicts? g) Will the location of drainage structures and outlets pose problems to land users? h) How will affected land users be informed and involved in the design and siting of drainage structures? i) How can drainage structures be used to benefit communities in water-deprived areas? j) Can ponding structures be added to collect run-off and provide additional watering points for	

	livestock (e.g., storm water catch basins, check dams to slow drainage, or damming devices such as raised box culverts) or can drainage structures be designed to allow farmers to harvest water? k) Are the communities likely to want the borrow pits converted to some other use after project completion? l) Can the design reflect this from the onset? m) Does the design and implementation process take into consideration health risks that are prevalent in the project area (e.g., guinea worm, malaria, or meningitis)?	
Road safety issues	a) Has a road safety audit been conducted on the road design? What measures need to be introduced to reduce the risk of accidents involving road users (i.e., pedestrians, cyclists, non-motorized carts, and vehicle operators) and road workers during construction and during operation and maintenance?	
Occupational health and safety issues	Has a noise and air pollution assessment been completed for the construction and operation phases? Will local communities or road workers be subjected to excessive noise or air, water, or vibration pollution? What measures have been taken to reduce these impacts and risks? What measures have been taken to reduce other hazards (e.g., chemical hazards and accident risks) to road users and road workers during construction and during operation and maintenance?	

Appendix 16- Example of Contract Clauses for use in Tender Documents and Agreements

Simple Environmental Clauses in Contract Specifications

Installation of work site

The contractor shall submit the work site for inspection and shall define the facilities to be created.

- The contractor shall limit disturbances to the environment for the site selected and for residents in the immediate vicinity, both in surface (clearing of brush or trees, water flow, waste storage) and in depth (rupture or pollution of ground water).
- The contractor shall execute, upon work completion, all work necessary to restore the site. The inspector shall write up a report outlining the site reclamation prior to official delivery.

Preparation and supply of quarry material

During the work phase, the contractor shall:

- Preserve trees during materials stockpiling;
- Level stripped materials to facilitate water percolation and make natural grass planting possible;
- Restore the natural flow to its previous state; an
- Create runoff recovery ditches and conserve access ramps, if the quarry is declared fit for use as a watering point for livestock or residents.

The contractor shall, upon work completion and at own expense, restore the environment around the site. A report will be submitted by the inspector certifying that such site restoration work has been completed.

Tree planting

The contractor shall plant trees at locations defined by the inspector, provide the recommended protection (e.g., clay brick wall, fencing), supply the required water and if necessary replace dead trees. The contractor shall provide complete maintenance for a period of 1 year after planting, including watering and cleaning out the bed at the foot of the tree.

The number of trees planted, along with the execution of protection and the digging of beds at the foot of the trees, will be noted by the inspector on the site records.

This record will be used at the official delivery to evaluate the services actually rendered. Once road maintenance work has been completed, the contractor shall indicate on the itinerary map the planting carried out (i.e., position, number).

Example of Contract Clauses for Use in Construction Supervision

(Article: ……. records to be kept by the consultant responsible for supervision)

The consultant responsible for supervision shall keep the following records: site report; route report updated to record work done; and proposals with a view to future studies.

Site report:

A monthly report on execution of the works shall be submitted by the consultant and shall summarize information regarding environmental improvements effected by the work performed during the month: steps taken by the contractor to preserve the environment and improvements observed upon closing down the site; trees planted (location, number, method of protection, maintenance, and monitoring); data on quarries and borrow pits used (location, area, depth, and improvements made); length of diverging ditches (partial and cumulative for all new and old ditches); position and volume of laying-up basins constructed; and position of strengthening works carried out on approaches to structures.

Updating of route plans:
The supervisor shall update the route plans, on which shall be shown all environmental data reported in the monthly reports, specifically: location of tree plantations; locations of quarries and pits used, with updated characteristics of each; location of diverging ditches; state of structures after sand removal upstream and downstream; and location, type, and number of anti-erosion devices in the drainage system.

Proposals with a view to future maintenance studies:
Once the work is completed, the supervisor shall propose, for the road sections covered, specific arrangements with a view to studying the subsequent maintenance programme. These proposals shall cover: improvement of the contract environmental clauses; special features of the road environment; urgent tasks to be undertaken to improve the environment; and any comments of supplementary data regarding the state of quarries, pits, and drainage.

SPECIAL CLAUSES
(Article: ……supervision of utilization of quarries and borrow pits).
The supervisor shall ensure proper utilization, by the contractor, of the quarries and pits designated by the detailed design with the aim of lessening the impact on the environment.

Preparation of materials in the quarry or pit:

- The supervisor shall designate trees to be protected and oversee storage of stripped material where it will not hinder water drainage;
- The supervisor shall oversee restoration to a natural state, including spreading of stored stripped material to facilitate water percolation and natural re-growth;
- The supervisor shall ensure that volume of stocks of materials is stored in each quarry or pit.

(Article ... supervision of the construction and maintenance of drainage works)
The supervisor shall specify the location and technical detail of drainage works and debris placement:

- Construction of diverging ditches;
- Construction of laying-up basins;
- Cleaning of side ditches, diverging ditches, and summit slope and foot slope ditches.

(Article: ……. tree planting
The supervisor shall instruct the contractor where trees are to be planted and the type of protection to be provided. The supervisor shall ensure that the contractor makes provision for the water needed for the trees to grow, and promptly replaces any dead trees. The supervisor shall draw up a report stating the number and good condition of the plantings at the time of final acceptance.

Appendix 17- Forms for Monitoring of Construction Works

The following compliance monitoring forms are contained in this appendix:

- Monitoring form no. 1: Environmental compliance of road development
- Monitoring form no. 2: Environmental compliance of borrow pit and quarry development and management
- Monitoring form no. 3: Environmental compliance of construction camp sites, stores and workshops

In case of non-compliance (compliance status 3) of one or more activities, the form must be accompanied with a written statement about the non-compliance, including the steps taken to correct the issue.

Environmental compliance monitoring form no. 1:
Road development

Road section:…… km:…… To km: ……..

Activity	**Contract spec ref (clause no.)**	**Compliance status(1,2, or 3)**	**Notes**
Land take – permanent compensation agreement Compensation has been negotiated Resettlement			
Land take – temporary (e.g. for detours) Lease agreement Compensation agreement Compensation has been negotiated			
Water course pollution			
Miter drains			
Erosion of earthworks			
Safe operation of detours			
Safe management of traffic			
Permanent traffic safety measures			
Noise/vibration/dust			
Site roads			
Conservation of trees and vegetation			
Other environmental issues			

Compliance monitoring key:

1. Activity complied with specifications and recommendations
2. Activity not at stage for compliance at time of audit
3. Activity does not comply with contract specifications (see notes)

Environmental compliance monitoring form no. 2:
Borrow pits and quarries

Borrow pit or quarry…….. Km: ……

Activity	**Contract spec ref (clause no)**	**Compliance status(1, 2 or 3)**	**Notes**
Development permit issued			
Development plan approved (by regional engineer and environmental monitor)			
Land take Compensation agreement Compensation has been negotiated Resettlement			
Site demarcation			
Land clearance			
Topsoil conservation			
Access arrangements			
External appearance			
Pollution Noise (e.g blasting) Dust Contaminated water Machinery (e.g fuel, lubricants, emissions)			
Safety Blasting Machinery Material storage Personal protection Intrusion protection			
Reinstatement			
Other environmental issues			

Compliance monitoring key:
1. Activity complied with specifications and recommendations
2. Activity not at stage for compliance at time of audit
3. Activity does not comply with contract specifications (see notes)

Environmental compliance monitoring form no. 3:
Construction camp sites, stores and workshops
Camp site, store or workshop…….. Km: ……

Activity	**Contract spec ref (clause no)**	**Compliance status(1, 2 or 3)**	**Notes**
Site approved			
Development plan approved (by regional engineer and environmental monitor)			
Land take Compensation agreement Compensation has been negotiated			
Site demarcation			

Land clearance			
Topsoil conservation			
Access arrangements			
Operation Water supply Sanitation Waste management Fuel and oil storage Bitumen and storage Hazardous material storage Energy supply Health and social services			
Safety			
Decommissioning			
Reinstatement			
Other environmental issues			

Compliance monitoring key:

1. Activity complied with specifications and recommendations
2. Activity not at stage for compliance at time of audit
3. Activity does not comply with contract specifications (see notes)

Appendix 18- Checklist for Road Maintenance

Environmental aspect		Assessment			Notes
		1	2	3	
1	**Soil erosion**				
2	**Hydrology:** Over-toping Water logging				
3	**Dust emissions:**				
4	**Structures:** Mitre dams Side drains Culverts Drifts Aprons Artificial waterways Wing walls				
5	**Run-off:** From upper catchment to road From road to lower catchment				
6	**Vegetation:** Roadside Embankments				
7	**Camps:** Sanitation (sewage and garbage) Cooking methods				
8	**Crushing plant:** Site condition Operations				
9	**Quarries and borrow pits:** Stockpiling Fencing Access roads and routes Rehabilitation and restoration				

Assessment key:

1. Complied with in contract
2. Not at stage of compliance monitoring
3. Does not comply with contract specifications (see notes)

Appendix 19- Template for Semi-annual Environmental Reporting

1. Name of reporting road authority
2. Reporting period, e.g. January - June 2010
3. Road projects initiated, in progress and/or completed during the reporting period. For each road project in progress, the following information is requested:
    a. Name of road;
    b. Location of project (from km xx to km yy);
    c. Category of road, i.e. trunk, regional, district, city, municipal, town, township, village or private road;
    d. Type of project, i.e. new road construction, upgrading, rehabilitation, periodic maintenance, routine maintenance, spot maintenance;
    e. How far has the project progressed (planning, pre-feasibility, feasibility, preliminary design, detailed design, tendering, contracting, execution, completed)
    f. Approved budget for project execution;
    g. Has a contractor been assigned to execute the road project? If yes, what is the name of the contractor?
    h. Is the project registered with the National Environmental Management body of a member state? If yes, what is the registration number?
    i. Is environmental impact assessment (EIA) required?
    j. Has environmental expert been assigned?
    k. Is EIA in progress?
    l. Has an environmental impact statement (EIS) submitted?
    m. Has EIA certificate been obtained? If yes, what is the certificate number?
    n. Has an environmental management plan (EMP) been prepared?
    o. What are the identified positive socio-economic impacts of the road project (such as better access to markets, schools, hospitals etc., improved potential for business development or the similar)?
    p. What are the identified positive environmental impacts of the road project (such as less air pollution due to better road conditions, better protection of nature areas and water courses due to improved road design or the similar)?
    q. What are the identified negative socio-economic impacts of the road project during construction and operation (such as need for displacement of people, exposure of people to air pollution and/or noise from construction works or road operation, increased incidence of road accidents etc.)?
    r. What are the identified negative environmental impacts of the road project during construction and operation (such as disturbance of wetlands and water courses, disturbance of wildlife, increased pollution levels etc.)?
    s. What measures will be taken to avoid, minimise or reduce the negative impacts of the road project?
    t. Has an environmental supervisor been assigned by the contractor to oversee that the environmental measures and the EMP is implemented? If yes, what is the name of the environmental supervisor?
4. Road projects in pipeline. Fore each road project in pipeline, the following information is required:
    a. Name of road;
    b. Location of project (from km xx to km yy);
    c. Category of road, i.e. trunk, regional, district, city, municipal, town, township, village or private road;
    d. Type of project, i.e. new road construction, upgrading, rehabilitation, periodic maintenance, routine maintenance, spot maintenance;

e. What are the major socio-economic and/or environmental issues to be managed in connection with the proposed project?
f. When is the project likely to be initiated?

5. What are the major socio-economic and environmental impacts of road sector development in your area of jurisdiction?

Appendix 20- Air Quality Standards

Ambient air quality tolerance limits

	Pollutant	**Time weighted Average**				**Test methods**
			Industrial area	**Residential, Rural & Other area**	**Controlled areas*** **	
1.	Sulphur oxides (SO_X);	Annual Average*	80 µg/m^3	60 µg/m^3	15 µg/m^3	IS0 4221-1980
		24 hours**	125 µg/m^3	80 µg/m^3	30 µg/m^3	
		Annual Average		0.019 ppm/50µg/m^3		
		Month Average				
		24 Hours		0.048ppm /125µg/m^3		
		One Hour				
		Instant Peak		500 µg/m^3		
		Instant Peak (10 min)		0.191 ppm		
2.	Oxides of Nitrogen (NO_X);	Annual Average*	80 µg/m^3	60 µg/m^3	15 µg/m^3	ISO7996: 1985
		24 hours**	150 µg/m^3	80 µg/m^3	30 µg/m^3	
		8 hours				
		Annual Average		0.2 ppm		
		Month Average		0.3 ppm		
		24 Hours		0.4 ppm		
		One Hour		0.8 ppm		
		Instant Peak		1.4 ppm		
3.	Nitrogen Dioxide	Annual Average	150 µg/m^3	0.05 ppm		IS0 6768:1998
		Month Average		0.08 ppm		
		24 Hours	100 µg/m^3	0.1 ppm		
		One Hour		0.2 ppm		
		Instant Peak		0.5 ppm		
4.	Suspended particulate matter (SPM)	Annual Average*	360 µg/m^3	140 µg/m^3	70 µg/m^3	ISO 9835:1993
		24 hours**	500 µg/m^3	200 µg/m^3	100 µg/m^3	
			Industrial area	**Residential, rural & other area**	**Controlled areas*** **	
		mg/Kg				
		Annual Average****		100 µg/m^3		
		24 hours***		180 µg/m^3		
5.	Respirable particulate matter (<10µm) (RPM)	Annual Average*	70 µg/m^3	50 µg/m^3	50 µg/m^3	ISO 9835:1993
		24 hours**	150 µg/Nm^3	100 µg/Nm^3	75 µg/Nm^3	
6.	$PM_{2.5}$	Annual	35 µg/m^3			ISO 9835:1993

	Pollutant	Time weighted Average				Test methods
		Average				
		24 hours	75 µg/m^3			
7.	Lead (Pb)	Annual Average*	1.0 µg/Nm^3	0.75 µg/Nm^3	0.50 µg/m^3	ISO 9855:1993
		24 hours**	1.5 µg/m^3	1.00 µg/m^3	0.75 µg/m^3	
		Month Average		2.5		
8.	Carbon monoxide (CO)/ carbon dioxide (CO_2)	8 hours**	5.0 mg/m^3	2.0 mg/m^3	1.0 mg/m^3	ISO 4224:2000
		1 hour	10.0 mg/m^3	4.0 mg/m^3	2.0 mg/m^3	
		mg/Kg				
		24 hours**				
9.	Non-methane hydrocarbons					
		instant Peak	700ppb			
10.	Total VOC	6 mg/m^3				ISO16000-6
11.	Ozone	1-Hour	200 µg/m^3	0.12 ppm		ISO 13964
		8 hour (instant Peak)	120 µg/m^3	1.25 ppm		

Ambient air quality at property boundary for general pollutants

	Pollutant	Time weighted Average	Property Boundary
1	Particulate matter (PM)	Annual Average*	50 µg/m^3
		24 hours**	70 µg/m^3
2.	Oxides of Nitrogen (NO_X);	Annual Average*	80 µg/m^3
		24 hours**	150 µg/m^3
3.	Sulphur oxides (SO_X);	Annual Average*	50 µg/m^3
		24 hours**	125 µg/m^3

Emission limit for ambient air

Pollutant	Guideline	Limit Level	Test Method
Sulphur oxides* SO_x	Large Combustion Plants (LCP) using solid fuel with thermal effect of: 50 to 100 MWth	Yearly average of: 850 mg/Nm^3	IS0 4221
	100 to 300 MWth	200 mg/Nm^3	
	> 300 MWth	200 mg/Nm^3	
	LCP using liquid fuel with thermal effect of: 50 to 100 MWth	850 mg/Nm^3	
	100 to 300 MWth	400 to 200 mg/Nm^3 (linear decrease)	
	> 300 MWth	200 mg/Nm^3	
	LCP using gaseous fuel	35 mg/Nm^3	

* To be reported as SO_2

Pollutant	Guideline	Limit Level	Test Method
	LCP using low calorific gases from gasification of refinery residues, coke oven gas, blast-furnace gas	800 mg/Nm^3	
Carbon monoxide CO	Liquid fuel combustion with heat output exceeding 5MW.	Not to exceed 175 mg/Nm^3	ISO 4224
	Solid fuel combustion with the heat output of 50MW and above	Not to exceed the level of 250 mg/Nm^3	
Hydrocarbon (as Total Organic Carbon)		Not to exceed 20 mg/Nm^3	ISO 12884
Dust	Inert dust, including cement.	Not to exceed 250mg/Nm^3 (24h mean value)	ISO 12141
Nitrogen Oxides* NO_x	LCP using solid fuel with thermal effect of: 50 to 500 MWth	Yearly average of: 600 mg/Nm^3	ISO 7996
	>500 MWth	500 mg/Nm^3	
	LCP using liquid fuel with thermal effect of: 50 to 500 MWth	450 mg/Nm^3	
	>500 MWth	400 mg/Nm^3	
	LCP using liquid fuel with thermal effect of: 50 to 500 MWth	300 mg/Nm^3	
	>500 MWth	200 mg/Nm^3	
Lead	Not to exceed 5 tonne/year of lead or lead compounds (measured as elemental lead) by a stationary source	0.15µg/Nm^3	ISO 9855
Sulphur oxides, SO_x*	Annual mean of 40 – 60 µg/Nm^3 (0.05-0.08 mg/kg) or 24 – hour average 100 µg/Nm^3 (0.129 mg/kg)	Daily average of hourly values shall not exceed 0.1 mg/kg 0.5 mg/Nm^3 for 10 minutes	ISO 4221 ISO 6767
Carbon monoxide, CO	Aims at preventing carboxyhaemoglobin levels exceeding 2.5-3% in non-smoking people.	A maximum permitted exposure of 100mg/Nm^3 for periods not exceeding 15 minutes. Time-weighed exposures at the following levels: 100 mg/Nm^3 for 15 minutes 60 mg/Nm^3 for 30 minutes; 30 mg/Nm^3 for 60 minutes 10 mg/Nm^3 for 8 hours. or Daily average of hourly values shall not exceed 10mg/kg and average of hourly values in eight consecutive hours shall not	ISO 4224 ISO 8186

* To be reported as NO_2
* To be reported as SO_2

Pollutant	Guideline	Limit Level	Test Method
		exceed 20 mg/kg.	
Black smoke and suspended particulate matters (PM 10)	Black smoke 40 to 60 µg/Nm^3 (0.05-0.08 mg/kg) PM 10 60 to 90 µg/Nm^3 (00.077 – 0.116 mg/kg)	Daily average of hourly values shall not exceed 0.10 µg/Nm^3 and hourly values shall not exceed 0.20 µg/Nm^3	ISO 9835
Nitrogen dioxide. NOx	Annual mean of 0.1 µg/Nm^3	150 µg/Nm^3 for 24-hours average value 120µg/Nm^3 for 8 hours	IS0 6768 and ISO 7996
Lead	Annual mean of 0.5 – 1.0 µg/Nm^3	1.5µg/Nm^3 for 24 – hours average value	ISO 9855
Ozone	Annual mean of 10 – 100 µg/Nm^3	120 µg/Nm^3 for 8 – hours average value	ISO 13964

The following limits shall apply for emission sources

Pollutant	Guideline	Limit level	Test Method
Sulphur oxides* SO_x	Large Combustion Plants (LCP) using solid fuel with thermal effect of: 50 to 100 MWth	Yearly average of: 850 mg/Nm^3	ISO 4221-and ISO 6767
	100 to 300 MWth	200 mg/Nm^3	
	> 300 MWth	200 mg/Nm^3	
	LCP using liquid fuel with thermal effect of: 50 to 100 MWth	850 mg/Nm^3	
	100 to 300 MWth	400 to 200 mg/Nm^3 (linear decrease)	
	> 300 MWth	200 mg/Nm^3	
	LCP using gaseous fuel	35 mg/Nm^3	
	LCP using low calorific gases from gasification of refinery residues, coke oven gas, blast-furnace gas	800 mg/Nm^3	
Carbon monoxide CO	Liquid fuel combustion with heat output exceeding 5MW.	Not to exceed 175 mg/Nm^3	ISO 4224 and ISO 8186
	Solid fuel combustion with the heat output of 50MW and above	Not to exceed the level of 250 mg/Nm^3	
Hydrocarbon (as Total Organic Carbon)		Not to exceed 20 mg/Nm^3	TZS 837 Part 7
Dust	Inert dust, including cement	Not to exceed 250mg/Nm^3 (24h mean value)	ISO
Nitrogen Oxides* NO_x	LCP using solid fuel with thermal effect of: 50 to 500 MWth	Yearly average of: 600 mg/Nm^3	ISO 7996
	>500 MWth	500 mg/Nm^3	

* To be reported as SO_2
* To be reported as NO_2

Pollutant	Guideline	Limit level	Test Method
	LCP using liquid fuel with thermal effect of: 50 to 500 MWth	450 mg/Nm^3	
	>500 MWth	400 mg/Nm^3	
	LCP using liquid fuel with thermal effect of: 50 to 500 MWth	300 mg/Nm^3	
	>500 MWth	200 mg/Nm^3	
Lead	Not to exceed 5 tonne/year of lead or lead compounds (measured as elemental lead) by a stationary source	0.5µg/Nm^3	ISO 9855:1993

Appendix 21- Water Quality Standards

Microbiological quality standards for drinking water

Class of pied water	Coliform count per 100 ml at 37□C	E.coli (faecal coliform) count per 100 ml at 44□C
Excellent	0	0
Satisfactory	1-3	0
Suspicious	4-10	0
Unsatisfactory	More than 10	1 or more

For each individual sample coliform should be estimated in terms of the "Most Probable Number" in 100 ml of drinking water, which is often designated as MPN index or Coli index. Occurrence of E. coli (faecal coli) in consecutive samples, in less than 100 ml of drinking water is an indication of faecal pollution and hence a dangerous situation needing urgent, rectification

Chemical and physical limits for quality of drinking water supplies

Group	Substance	Unit	lower limit	Upper limit
TOXIC	Lead, Pb		-	0.1
	Arsenic, As		-	0.05
	Selenium, Se		-	0.05
	Chromium, Cr 6+		-	0.20
	Cyanide, CN	Mg/L	-	0.05
	Cadmium, Cd		-	1.0
	Barium, Ba		-	0.001
	Mercury, Hg		-	n.m
	Silver, Ag			
Affecting human health	Fluoride, F	Mg/l	1.5	4.0
	Nitrate, NO_3	Mg/l	10.0	75.0
Organoleptic	Colour	TCU	1.5	50
	Turbidity	NTU	5	25
	Taste	-	n.o	-
	Odour	-	n.o	-
Salinity and hardness	pH	-	6.5	9.2
	total filterable residue	Mg/l	500	2000
	total hardness($CaCO_3$)	Mg/l	500	600
	Calcium, Ca	Mg/l	75	300
	Magnesium, Mg	Mg/l	50	100
	Magnesium +sodium	Mg/l	500	1000
	Suphate, SO_{42}	Mg/l	200	600
	Chloride, Cl^-	Mg/l	200	800
Less toxic metals	Iron, Fe		0.3	1.0
	Manganese, Mn	Mg/l	0.1	0.5
	Copper, Cu		1.0	3.0
	Zinc, Zn		5.0	15.0
Organic pollution of natural origin	BOD (5 days at 30□C)		6.0	6.0
	PV(oxygen abs $KMnO_4$)		10	20
	Ammonium (NH_3+NH_4)	Mg/l	2.0	2.0
	Total nitrogen (excluding $NO_{3)}$		1.0	1.0
Organic pollution induced artificially	Surfactants(alkali benzyl sulphonates)		1.0	2.0
	Organic matter(as carbon in chloroform extract)	Mg/l	0.5	0.5
	Phenol; substances(as phenol)		0.002	0.002

Note: n.o = not objectionable n.m = not mentioned

Appendix 22: Noise Quality Standards

Classification of Land Use Categories

Class	Land use category	Description
Type A	Institutional areas	Areas where quietness required and where welfare institutions are concentrated (Hospitals, Public courts, etc)
Type B	Residential/Institutional	Areas with both residential and institutional buildings and areas with open and low density buildings as well as apartment houses (e.g. schools, offices, etc)
Type C	Recreational areas	Areas with recreational centres and houses, recreational areas for public use and nature reserve areas
Type D	Residential/Commercial	Areas allocated for both residential and commercial activities such as shopping / market areas, etc
Type E	Trade/Commercial/Residential	Includes light industry, stores, repair shops, etc Unplanned areas without strong connection between trade and owners of dwellings City centre areas with high concentration of shops (Central Business District)
Type F	Industrial areas	Areas allocated exclusively for industrial activities for which it is difficult or very costly to reduce noise
Type G	Open country/Undeveloped lands	Agricultural areas/rangelands

Standard noise values for different types of land use categories

Area	Standard Value (dBA)	
	Day Time	Night Time
Type A	50 or less	40 0r less
Type B	50 or less	45 or less
Type C	55 or less	45 or less
Type D	60 or less	50 or less
Type E	65 or less	55 or less
Type F	70 or less	70 or less

Noise standards for areas facing roads

Area class	Standard value (dB A)	
	Day Time	Night Time
Area Type A facing roads with two or more lanes	50 or less	45 or less
Area Type B facing roads with two or more lanes and Areas Type C facing a road with one or more lanes	55 or less	45 or less

Note: Lane = refers to a longitudinal strip of road with uniform width to enable a single line of cars to travel safely and without hindrance

Noise emission standards for construction equipment and small and large vehicles

Equipment/Vehicle	Noise limit (dB A)
Small motorbike or scooter	80
Passenger car	82
Small bus or commercial vehicle	85
Medium bus or commercial vehicle	89
Large bus or commercial vehicle	91
Compactors (rollers), front loaders, concrete mixers, cranes (movable)	75
Dozers, graders, trucks, jack hammers	75

For noise measurements reporting the following information based on ISO 1996 shall be mandatory:

- The purpose of the measurement

- The standard used
- Equipment used, including serial numbers
- Map showing position of sound

Appendix 23: Soil Quality Standards

Contaminant limits for volatile organic compounds

S/N	Parameter	Upper limit (mg/kg)	Test method
1	Benzene	5	TZS 973-ISO 15009
2	Carbon Tetrachloride	5	***
3	1,2- Dichloromethane	5	TZS 973-ISO 15009
4	1,1- Dichloromethane	0.5	TZS 973-ISO 15009
5	cis-1,2- Dichloromethane	40	***
6	trans-1,2-Dichloromethane	60	***
7	Dichloromethane	90	TZS 973-ISO 15009
8	Ethyl benzene	200	TZS 973-ISO 15009
9	Styrene	1,000	***
10	Tetrachloroethylene	50	***
11	Toluene	500	ISO 15009:2002 (E) TZS 973
12	Trichloroethane	30	***
13	1,1,1- Trichloroethane	600	TZS 973-ISO 15009
14	1,1,2-Trichloroethane	10	TZS 973-ISO 15009
15	Total Xylenes	200	TZS 973-ISO 15009

Contaminant limits for heavy metals

S/N	Parameter	Upper limit (mg/kg)	Test method
1	Arsenic	1	***
2	Cadmium	1	TZS 974-ISO 11047
3	Hexavalent Chromium	100	TZS 974-ISO 11047
4	Lead	200	TZS 974-ISO 11047
5	Manganese	1,800	TZS 974-ISO 11047
6	Mercury	2	TZS 974-ISO 11047
7	Nickel	100	TZS 974-ISO 11047
8	Selenium	20	***
9	Copper	200	TZS 974-ISO 11047
10	Zinc	150	TZS 974-ISO 11047
11	Molybdenum	5	***

Contaminant limits for pesticides

S/N	Parameter	Upper limit(mg/kg)	Test method
1	Atrzine	50	TZS 976-ISO 11264
2	2,4-Dichlorophenox acetic acid (2,4-D Amine)	700	***
3	2,4-Dichlorophenox acetic acid Amine (2,4-D Amine)	700	***
4	Lindane	2	GC (AOAC Methods,1984, JAOAC, 1980, Pesticides Analytical Manual, 1979)
5	Pentachlorophenol	20	TZS 977-ISO 10382
6	Sulphur	500	Titrimetry (CIPAC Handbook)
7	Endosulfan	60	GC with MCD or ECD (Analytical Methods Residue Pesticides, 1988, Part 1)
8	Glyphosate	700	HPLC (Pesticide Analytical Manual,1999 II)

9	Acetochlor	500	GC With ECD or FID
10	Carbofuran	200	GC (Analytical Methods Residue Pesticides, 1988, Part 1)
11	Paraquat	300	Colorimetry (Pesticides Analytical Manual, 1979 II)
12	Diquat	150	Colorimetry (Pesticides Analytical Manual, 1979 II, Analytical Methods Plant Growth Regulators, 1978)
13	**Chlordane	0.6	***
14	*DDT	3	TZS 977-ISO 10382
15	**Dieldrin	0.05	TZS 977-ISO 10382
16	**Heptachlor	0.2	TZS 977-ISO 10382
17	**Toxaphene	0.6	***
18	**Aldrin	0.05	TZS 977-ISO 10382
19	**Hexachlorobenzene	500	TZS 977-ISO 10382

Contaminants limits for other chemicals

S/N	Parameter	Upper limit(mg/kg)	Test method
1	Benzo (a) pyrene	1.0	***
2	Cyanide	10	TZS 977-ISO 10382
3	Polychlorinated Biphenyls (PCBs)	1.0	TZS 977-ISO 10382
4	Vinyl Chloride	1.0	***
5	Polychlorinated Dibenzo Dioxins	100ng TEQ/kg	***

Appendix 24: Standards for Wastewater/Effluent Discharges

Permissible limits
Physical components

Parameter	Limit	Test method
BOD_5 at 20 ^oC	30mg/L	TZS 861: Part 3
COD	60mg/L	TZS 861: Part 4 – Dichromate digestion methods
Colour	300 TCU	ISO 7887: 1994, water quality - Examination and determination of color – Section 3: Determination of true color using optical instruments
pH range	6.5-8.5	TZS 861: Part 2 – Electrometric method
Temperature range	20-35^{0}C	See annex A
Total Suspended Solids (TSS)	100 mg/L	TZS 861: Part 1 – Gravimetric method
Turbidity	300 NTU	APHA Standard methods: 2130 B. Nephelometric method

Inorganic components

Parameter	Limit(mg/L)	Test method
Aluminium(as Al)	2.0	TZS 861: Part 7 – Direct nitrous oxide-Acetylene flame atomic absorption spectrometry
Arsenic (As)	0.2	TZS 861: Part 8 – Manual hydride generation – Atomic absorption spectrometry
Barium (Ba)	1.5	TZS 861: Part 7 - Direct nitrous oxide-Acetylene flame atomic absorption spectrometry
Cadmium(Cd)	0.1	TZS 861: Part 7 - Flame atomic absorption spectrometry
Chromium (total)	1.0	TZS 861: Part 7 – Flame atomic absorption spectrometry
Chromium VI	0.1	TZS 861: Part 9 – Colorimetric method
Chlorides (Cl^-)	200	APHA Standard Methods: 4110 B. Ion Chromatography with chemical suppression of eluant conductivity
Cobalt (Co)	1.0	TZS 861: Part 7 – Flame atomic absorption spectrometry
Copper	2.0	TZS 861: Part 7 – Flame atomic absorption spectrometry
Fluorides(F^-)	8	APHA Standard Methods: 4110 B. Ion Chromatography with chemical suppression of eluant conductivity
Iron	5.0	TZS 861: Part 7 – Flame atomic absorption spectrometry
Lead (Pb)	0.1	TZS 861: Part 7 – Flame atomic absorption spectrometry
Manganese	5.0	TZS 861: Part 7 – Flame atomic absorption spectrometry
Mercury (Hg)	0.005	TZS 861: Part 10 – Cold-vapor atomic absorption spectrometry
Nickel (Ni)	0.5	TZS 861: Part 7 – Flame atomic absorption spectrometry
Nitrates (NO_3^-)	20	APHA Standard Methods: 4110 B. Ion Chromatography with chemical suppression of

		electrical conductivity
Phosphorus Total(as P)	6	TZS 861: Part 6 – Colorimetric-ascorbic acid method
Selenium (Se)	1.0	TZS 861: Part 8 – Manual hydride generation- Atomic absorption spectrometry.
Silver (Ag)	0.1	ISO 15586: 2003,Water quality Determination of trace elements using atomic absorption spectrometer with graphite furnace
Sulphate (SO_4^{2-})	500	APHA Standard Methods: 4110 B. Ion Chromatography with chemical suppression of eluant conductivity
Sulphides (S^-)	1	APHA Standard Methods: 4110 B. Ion Chromatography with chemical suppression of eluant conductivity
Tin (Sn)	2.0	TZS 861: Part 7 – Flame atomic absorption spectrometry
Total Kjeldahl Nitrogen (as N)	15	TZS 861: Part 5 – Kjeldahl method
Vanadium	1.0	ISO 15586: 2003,Water quality Determination of trace elements using atomic absorption spectrometer with graphite furnace
Zinc (Zn)	5.0	TZS 861: Part 7 – Flame atomic absorption spectrometry

Organic components

Parameter	**Limit(mg/L)**	**Test method**
1, 1, 2 – Trichloroethane	0.06	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
1, 1, 1 – Trichloroethane	3.0	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
1,2 - Dichloroethylene	0.2	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
1,2 - Dichloroethane	0.04	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
1,3 - Dichloropropene	0.2	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
Alkyl benzene sulfonate (ABS)	0.5	ISO 7875 - 1: 1996, Determination of surfactants - Part 1: Determination of anionic surfactants by measurement of the methylene blue index (MBAS)
Aromatic nitrogen containing compounds (e.g.,aromatic amines)	0.001	APHA standard methods 6410: Liquid-liquid extraction GC/MS method
Cis-1,2-Dichloroethylene	0.4	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
Dichloromethane	0.2	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
Oil and grease (fatty	10	APHA standard methods 5520

matters and hydrocarborns)		
Organochlorine pesticides (CI)	0.0005	GC ECD (ISO 6468: 1996, Water quality – Determination of certain organochlorine insecticides, polychlorinated biphenyls and chlorobenzenes – Gas chromatographic method after liquid-liquid extraction)
Other aromatic and/or aliphatic hydrocarbons not used as pesticides	0.05	GC ECD (ISO 6468: 1996, Water quality – Determination of certain organochlorine insecticides, polychlorinated biphenyls and chlorobenzenes – Gas chromatographic method after liquid-liquid extraction)
Pesticides other than organochlorines	0.01	GC ECD (ISO 6468: 1996, Water quality – Determination of certain organochlorine insecticides, polychlorinated biphenyls and chlorobenzenes – Gas chromatographic method after liquid-liquid extraction)
Phenols	0.002	GC ECD (ISO 6468: 1996, Water quality – Determination of certain organochlorine insecticides, polychlorinated biphenyls and chlorobenzenes – Gas chromatographic method after liquid-liquid extraction)
Tetrachloroethylene	0.1	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)

Parameter	**Limit(mg/L)**	**Test method**
Tetrachloromethane	0.02	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)
Trichloroethylene	0.3	GC ECD (ISO 10301: 1997, Water quality – Determination of highly volatile halogenated hydrocarbons – Gas chromatographic methods)

Microbiological components

Parameter	**Limit**	**Test method**
Total coliform organisms	10,000 counts/100mL	ISO 6222:1999,Microbiological methods

Appendix 25 Vibration Standards

Tolerance Limits for Whole Body Vibration

Daily exposure limit period	Daily exposure limit value	Daily exposure action value	Test method
8 hours	1.15 m/s^2	0.5 m/s^2	EMDC 5 (3455), EMDC 5 (3456)

Tolerance Limits for Hand Arm Vibration

Daily exposure limit period	Daily exposure limit value	Daily exposure action value	Test method
8 hours	5 m/s^2	2.5 m/s^2	EMDC 5(3453), EMDC 5 (3454)

Tolerance Limit for Ground Vibration At Sensitive Sites

Limit on ground vibration	**Test method**
5 mm/s PPV at all times	Seismograph

Tolerance Limits for Subsonic Vibration/ Air over Pressure

Limit on sensitive sites	**Test method**
120 dBL at all times	Seismograph

Appendix 26: Electromagnetic Waves Standards

Radiation weighting factor

Type and energy range of radiation	Radiation weighing factor w_R
Photons all energies	1
Electrons and muons, all energies*	1
Neutrons, energy	
<10 keV	5
10 keV to 100 keV	10
>100 keV to 2 MeV	20
>2 MeV to 20 MeV	10
>20 MeV	5
Protons, other than recoil protons, energy. 2MeV	5
Alpha particles, fission fragments, heavy nuclei	20

Tissue weighting factor

Tissue or organ	Tissue weighting factor w_T
Gonads	0.20
Bone marrow (red)	0.12
Colon[a]	0.12
Lung	0.12
Stomach	0.12
Bladder	0.05
Breast	0.05
Liver	0.05
Oesophagus	0.05
Thyroid	0.05
Skin	0.01
Bone surface	0.01
Remainder	0.05

Occupational dose limits

1.Effective dose limit	200mSv per year, Averaged over a period of 5 consecutive calendar years
2. Effective dose limit in a single year	50mSv
3. Eguivalent dose limit	
In the lens of the eye	150mSv per year
In the skin[1]	500mSv per year
In the hands and feet	500mSv per year

Occupational dose limits for apprentices of 16 to 18 years of age

.Effective dose limit	6mSv in a year
2.Equivalent dose limit	
In the lens of the eye	50mSv per year
In the skin	150mSv per year
In the hands and feet	150mSv per year

Appendix 27: Methodologies for Socioeconomic Impacts Assessments

(a) Social well being

Assessing the impact on employment and income:

A road project creates employment and income opportunities, which may include

- Wage labor
- Regular employment
- Self-employment, piece-work (lasting for more than one month)
- Sale of agricultural or other consumer goods to the road workers and passengers
- Sale of handicrafts and industrial produces to tourists, passengers and wider markets
- Other entrepreneurial activities

Some road projects may lead to income opportunities being decimated or destroyed, as when shops and structures have to be destroyed to expand an existing road or creation of a new road

Related Questions

- *Current unemployment rate in the community and what it was in the past.*
- *The differences in unemployment between gender and ethnicity*
- *How the project is likely to influence unemployment rate and distribution of employment among different groups.*
- *The average, maximum and minimum overall income of the workers in the community*
- *What is the range of income or wage rates for jobs associated with the proposed project?*
- *Will the new development offer temporary or permanent jobs?*
- *Will the road require additional workers to move in from outside the community or will the current population fill available positions?*

Social services

- Change in the size and composition of the population due to new influx of people working on the proposed project, will call for a variety of services, which need to be assessed by looking at:
- the present level of services in the community, their current distribution and the anticipated needs and accessibility to services of the future population, problems encountered in delivering these services?

Measuring community perception about social well being:

Although difficult to quantify, this aspect of assessment is helpful to identify and address potential conflicts of interest that may accompany the road project. This aspect also provides clues on how a proposed road may influence neighborhood cohesion or cultural differences among the community.

The assessment entails finding out the attitude of the community towards the project by asking the following questions: using a wide range of participatory planning tools and methods/techniques.

1. What is the views of the community with regard to the new project and why?
2. What are their views of anticipated effects/impacts and how will the impacts be measured especially if there is a fear of change
3. Is the community generally supportive of the kind of development, which is being proposed or has been consistently opposed to this type of development?

4. What is the magnitude of the affect of the project likely to be?
5. Has there been controversy over the proposed project and why? What has been the dimension of the disagreement?
6. What local issues from different social and gender groups has emerged as a result of the new project and which groups have taken which positions? Are the positions consistent with previous patterns in the community?
7. Information about the attitudes and perceptions should be gathered from the leaders because their opinions may reflect the views of their entire communities

(b) HIV/AIDS Impact Assessment

The same participatory qualitative tools are used to find out from the communities what they already know about HIV. A mapping assessment tool is used to analyse the relationship between the project activities and HIV vulnerability in the community. Other supplementary approaches would include, gathering statistics and other recorded information from the community health facility and the district.

HIV/AIDS IMPACT ASSESSMENT AND MITIGATION

- How is HIV transmission most likely to occur in the community?
- And effect of HIV aids on the members of various income group and gender?
- How HIV is transmission and road projects are associated in the community?
- What other things are already happening in the community that will influence HIV transmission?
- Who are most vulnerable to HIV/AIDs and who in the community influence the behavior to avoid HIV transmission?
- What will help create an enabling environment so that people find it easy to change their behavior and avoid HIV transmission?

Mi*tigation measures that aim at the following*

- Build the community capacity to be HIV resilient
- Prevent further transmission and minimize the impact of the epidemic (health impact, social impact, development impact)
- Engage the community through existing organizations, groups and structures
- Build partnership and trust through communication, networking and collaboration.
- Including people with HIVAIDS at all stages to enhance their visibility and share their skills and experiences
- Raise awareness about HIV through dissemination of information using culturally appropriate methods (IEC)
- Ensure access to condoms to sexually active people especially those who will be in touch with the project
- HIV counseling, testing and referral services
- STI diagnosis and treatment
- Participation of people living with HIV/AIDs

(c) Gender impact assessment

Allows the assessment of likely impacts in terms of gender equality and equity: It is important to make use of gender disaggregated data gathering methods through involvement of broad gender sensitive partnership It is also vital to involve both men and women as key informants during the survey and interviews.

What information is important?

Outline the current status/position of men and women in the community that is targeted by the project. Who are the beneficiaries? How many women and men?

- Outline the likely factors that lead to women and men being affected differentially by the impacts and mitigation measures to address them.
- Do men and women have the capacity and opportunity to access the opportunities equally. Are there barriers which impede such success?
- Does the project deliver outcomes that will affect women and men differently? For instance providing women/men with increased access to basic social infrastructure?
- Will the project enhance female/male access to resources and technology?
- Will it improve women/men's health in terms of access to facilities and with respect to terms and conditions of work (duration, equipment and facilities that are not likely to cause injuries and accidents)
- Will the project provide women/men with more or better education and training - long and short term?
- Will the project enhance women/men's income opportunities by directly being employed **or** employing themselves - road side business
- Will the project cause barriers to women/men's participation in the project (cultural and attitude)- how will they be handled? Examples of barriers include:

    - cultural traditions that prescribe specific roles for women and men which may make them unable to participate in activities.
    - local attitudes that may prevent women and/or men from participating in project activities.
    - traditional work burdens that will prevent women and/or men from making use of opportunities provided by the development intervention in question
    - lack of information that prevents women and/or men from making use of new opportunities
    - lack of resources (as for example child care/skills) that prevents women and/or men from making use of new opportunities

Identifying barriers implies that the project is designed to take care of and help overcome opposition to women's and men's participation due to cultural traditions linked to gender roles or practical reasons that prevent participation.
Examples of identifying barriers include/mitigation measures

- Identifying cultural traditions with regard to gender roles
- Designing projects so that change may take place without creating antagonism between women and men
- Planning projects so that both women and men may participate without disturbing the tasks that have to be carried out, thus placing extra burdens on the families
- Including carefully designed awareness programmes for women and men
- Ascertain that budgets reflect both women's and men's participation in the activity
- Will the project promote women/men's opportunity to participate in the activity
- Will the project give women/men increased control over resources and technology

Appendix 28: Implementation Checklist for CRP

Activity	Yes	No	Action	Comments
Project Identification				
Has the alignment been confirmed?				
Were potentially affected communities consulted during the preparation of the CRP?				
Has a communication strategy been prepared?				
Socio-Economic Profile of PAPs				
Has a PAP Census been undertaken to identify the affected persons and the affected assets?				
Has a survey of the assets including land, structures, trees, crops and other properties, been done?				
Has a detailed Household survey of all the affected PAPs been carried out?				
Have vulnerable groups been clearly identified?				
Have the affected properties and potential relocation been mapped?				
Compensation Characteristics				
Have the criteria for eligibility for compensation been established?				
Has an estimate of the cost of compensation and resettlement been arrived at?				
Have mechanisms for the delivery of entitlements been developed?				
Compensation and Resettlement Requirements				
Have the compensation and resettlement preferences of the PAPs been taken into account?				
Have the types of assistance required by the PAPs during relocation and rehabilitation been considered?				
Are any sites of cultural, traditional, religious and historical importance affected by the resettlements process?				
Impacts of Resettlement				
Have the environmental impacts of the relocation process been identified and mitigation measures developed?				
Have the social impacts of the relocation process been identified and mitigation measures developed?				
Implementation Schedule				
Has an implementation schedule been prepared?				
Implementation of the CRP				
Have the roles and responsibilities of all				

the stakeholders been involved in the implementation of the compensation and resettlement process been established?				
Has awareness among the PAPs been created through continued consultations with the PAPs?				
Have the organizations been involved in the C&R process been mobilized?				
Have the local authorizes reconfirmed land that has been earmarked for resettlement?				
Has an EIA of the proposed relocation sites been carried out to ensure that adverse impacts on the biophysical and social environments of the sites are avoided or minimized?				
Have the PAPs and identified affected structures been reconfirmed?				
Have the compensation rates applied for valuation been reconfirmed?				
Has compensation been paid?				
Resettlement Activities				
Has land for resettlement been prepared?				
Have the new houses and structures been constructed?				
Is the implementation schedule being adhered to?				
Is the community participating in the implementation process?				
Have mechanisms for grievances redress been put in place?				
Monitoring, Evaluation and Reporting				
Is performance monitoring being undertaken continually, and being reported on a monthly basis?				
Has the C&R implementation process been evaluated and have evaluation reports been submitted?				
Has a completion audit been undertaken?				
Did the community participate in monitoring and evaluation?				
Has an adequate budget been provided for monitoring and evaluation?				

Appendix 29: CRP Reporting Format

The reporting format should include, but need not be limited to, the following;

1. Introduction
2. Description of the Road Project
3. Policy and Legal Framework
4. Institutional and Organizational Framework
5. Project Affected Persons/Parties Census
6. Socio-Economic Profile of the PAPs
7. Vulnerable Groups
8. Relocations Options
9. Public Consultations
10. Sites of Cultural, Traditional and Personal Importance
11. Eligibility
12. Valuation of Affected Assets
13. Implementation of the CRP
14. Monitoring of the CRP
15. Environmental Protection and Management
16. Costs of the CRP
17. Annexes

FINAL REPORT

ANNEX C

HARMONISATION OF MOTOR VEHICLE REGISTRATION AND LICENSING

TABLE OF CONTENTS

ACRONYMS

Art	Article
BRA	Burundi Revenue Authority
Cap	Chapter of the Law
COMESA	Common Market for Eastern and Southern Africa
CTLA	Central Transport Licensing Authority
EAC	East African Community
EATTFP	East African Trade and Transport Facilitation Project
GN	Government Notice
JICA	Japan International Co-operation Agency
KRA	Kenya Revenue Authority
Kshs	Kenyan shillings
LHD	Left Hand Drive
LN	Legal Notice
MINIFRA	Ministry of Infrastructure (Rwanda)
NTB	non-tariff barrier
R	Rule/Regulation
R.E.	Revised Edition
RHD	Right Hand Drive
RLA	Regional Licensing Authority
RRA	Rwanda Revenue Authority
RURA	Rwanda Utility Regulatory Agency
S	Section
SADC	Southern African Development Community
SARPCCO	Southern African Regional Police Chiefs Co-operation Organisation
SUMATRA	Surface and Marine Transport Regulatory Authority (Tanzania)
TLA	Transport Licensing Act
TLB	Transport Licensing Board (Uganda)
TRA	Tanzania Revenue Authority
UAR	Uganda Revenue Authority
ZRB	Zanzibar Revenue Board

EXECUTIVE SUMMARY

Introduction

Article 90 of the Treaty for the Establishment of the East African Community which is entitled "Roads and Road Transport" requires Partner States to, among other things, harmonize the provisions of their laws concerning motor vehicles registration and licensing to smoothen travel and transport within the Community. This was the primary task of the Consultant in this thematic area which was also underscored by one of the TORs which required the Consultant to "review existing laws and regulations concerning vehicle registration and licensing and propose areas for improvement and harmonization." Further the Consultant was required to propose harmonized regulations on motor vehicle registration and licensing.

Parent legislation on the subject matter which were identified and reviewed by the Consultant are as follows:

- Act No. 1/04 of 2009 on Domestic Road Transport (Burundi);
- The Road Traffic Act, 1973 Cap 168 (Tanzania);
- The Road Traffic Act, 2009 Cap 403 (Kenya);
- The Traffic and Road Safety Act, 1998, Act 15/1988 (Uganda);
- 02/09/2002 – Presidential Decree No. 85/01 Regulating General Traffic Police and Road Traffic (Rwanda);
- The Road Transport Act 2003 (Zanzibar).

Besides the parent legislation, the Consultant also reviewed the available subsidiary legislation on traffic matters applicable in the Partner States.

The review of the applicable legislation in the Partner States showed that there are many areas of commonality or convergence, as well as, areas of divergence, which call for improvement and harmonization in order to remove the obstacles and hurdles which interfere with smooth flow of transport and road services in the Community.

Motor Vehicle Registration

As far as motor vehicle registration is concerned, the following constitute the areas of convergence among the Partner States:

- Appointment/designation of Registrars of Motor Vehicles. Basically, these are public offices in form of revenue authorities.
- Prohibition of ownership, possession or use of motor vehicles unless they are registered under the applicable law. The registration is done upon the owner making an application in the prescribed form and on payment of the prescribed fee. Registration is done according to the class to which the vehicle belongs.
- All legislation in the Partner States prescribe conditions which must be complied with before a motor vehicle or trailer is registered. The conditions are more or less similar, but there are differences in some areas.
- Upon registration each State requires the motor vehicle to be issued with a registration book or registration card/certificate and the motor vehicle must be assigned with prescribed identification

marks. The book, card or marks should be carried by the motor vehicle in accordance with the prescribed regulations.

- Change in ownership is attended by a prescribed procedure before ownership vests in the new owner.
- All Partner States require the registration of government, armed forces, consular and international organizations' motor vehicles whether under the traffic laws or under a separate legislation. The procedures for registration, however, vary from one Partner State to the other.
- All Partner States' legislation creates criminal offences and imposes penalties in form of fines or imprisonment or both for failure to register a motor vehicle in accordance with the applicable law.
- Use of ICT in the registration of motor vehicles is not a statutory requirement in the Partner States' legislation except Burundi.
- Sharing of data on motor vehicle registration and licensing among the Partner States is not a mandatory requirement in Partner States' laws.

Areas of divergences include, among others;

- The type, number and mode of appointment of staff in the public offices charged with the registration of motor vehicles.
- The classification and the criteria for classification of motor vehicles. Since classification changes from time to time it is advisable to place the classification in the regulations to avoid the long and rigid procedure of amending the principal legislation which is normally done by the Legislature and not the Minister as is the case with regulations.
- The age of the owner or applicant for registration of a motor vehicle.
- How to register a motor vehicle which belongs to more than one owner.
- The procedures where the motor vehicle changes ownership by virtue of sale or any other disposition.
- Suspension or cancellation of registration of motor vehicles.
- Registration dependent on age of motor vehicle.

Motor Vehicle Licensing

In terms of motor vehicle licensing the following constitute areas of convergence:

- Like registration, all Partner States' legislation establishes motor vehicle licensing authorities and provide for the appointment or designation of the said authorities.
- Ownership, possession and use of a motor vehicle in all the Partner States is prohibited unless the motor vehicle is licensed after complying with the prescribed conditions.
- Dealers in motor vehicles, repair, manufacture, or second hand vehicles are required to obtain dealer' general licences on fulfilling the prescribed conditions.
- All licences in respect of motor vehicles which are temporarily or permanently out of use or exported outside the country of registration must be surrendered to the licensing authorities for cancellation.
- New licence must be obtained by a new owner where there is change of ownership of the motor vehicle or there is a major alteration in the structure of the licensed motor vehicle.
- All motor vehicles in the Partner States are classified based on a myriad of criteria, but the classification is not uniform.

- Like registration, there are certain categories of vehicles in the Partner States which are exempted from licensing.
- All Partner States require the motor vehicle licences to be displayed in a prescribed manner short of which criminal proceedings may be mounted against the offender.

There are few areas of divergence as follows:

- There is disparity either in the parent or subsidiary legislation of the Partner States on who appoints the principal officers and the support staff responsible for motor vehicle licensing.
- There is no clarity either in the parent or subsidiary legislation of the Partner States on whether motor vehicles exempted from registration under the traffic legislation are automatically exempted from licensing and whether foreign motor vehicles in each Partner State are equally exempted from licensing.
- Divergences are notable in the legislation among the Partner states on the granting of dealers' licences.
- In some Partner States motor vehicle (road) licensing fee is collected in form of fuel levy.

Motor Vehicle Operators' Licensing

In this area the following areas of convergence were observed:-

- In all Partner States grant of operators' licence is done either by revenue authorities or government department/agency in the ministries of transport;
- Operators' licences are granted subject to compliance with statutory conditions which include reliability, good repute, financial stability, efficiency and road worthiness of the motor vehicles;
- Lack of domestication of the regional agreements into national or domestic laws prevails in all the Partner States;
- Enforcement of the law regulating operators is left in the hands of the regulatory agencies assisted by the police but in all cases they are financially, technically and humanly under-resourced.

Key areas of divergence are:

- Not all Partner States have established road regulatory agencies to oversee road transport operators;
- Public passenger transport services are still provided by the government in one of the Partner States.

Recommended Legal Framework

Based on the desk review of the laws applicable in the Partner States, coupled with the experts' views gathered in meetings held in all the Partner States and as buttressed by the Task Force views, a legal instrument on motor vehicle registration, licensing and operators' licensing is, accordingly, recommended. The instrument should canvass, among others, the following:

- Registration and licensing of motor vehicles should be done by each Partner State based on common agreed criteria or parameters;
- Designation of revenue authorities as revenue collectors while registration and issuance of licences is actually done by transport ministries;

- Use of ICT in motor vehicle registration and licensing;
- Creation of a forum for road transport regulators to share their experiences and implementation of the proposed legal instrument;
- Creation of data base and sharing of data on motor vehicle registration and licensing among the Partner States;
- Grant and use of friendly ICT identification marks on registered and licensed motor vehicles;
- In addition to other requirements, only environmentally sound motor vehicles should be registered and licensed in the region. Imported vehicles should not be more than 8 years old when application for first registration in a partner state is submitted;
- Prohibit charging of permit fees for motor vehicles of one Partner State entering another Partner State so as to accommodate the spirit of the EAC Protocol on Common Market;
- Incorporate the provisions of the Road Tripartite Agreement of 2001after review of Article IV;
- The proposed law should be a bare framework while further details shall be prescribed in Regulations made by the Council of Ministers or a Minister in charge of transport in a respective Partner State.

The form of instrument recommended for this purpose is an Act of the Community as previously recommended by similar studies carried out by the EAC, such as, the Study on the Legal Framework for Introducing One Stop Border Post, 2010.

1. INTRODUCTION

The role of road transport in the Partner States and the Community generally cannot be over-emphasized. At regional level, road transport provides an affordable means of transport to many people in terms of facilitation of their own or goods movement from one Partner State to another. Similarly, at country level, road transport plays a significant role in the movement of people and goods from one point to another especially in rural areas where the other modes of transport are hardly available or applicable. In all cases, the available objects of transport are motor vehicles be it for passenger or goods movement. Thus, the road and the motor vehicle are the main stay of man's livelihood in the Community both in urban, rural and interregional movements.

Chapter 15 of the Treaty for the Establishment of the East African Community (EAC) advocates for cooperation in infrastructure and transport services. Of prime importance, for purposes of this review, is Article 90 (Roads and Road Transport) which provides that Partner States shall, inter alia;

- harmonise the provisions of their laws concerning licensing, equipment, markings and registration numbers of vehicles for travel and transport within the Community;
- adopt common and simplified documentation procedures for road transportation within the Community and harmonise road transit charges;
- ensure that common carriers from other Partner States have the same opportunities and facilities as common carriers in their territories in the undertaking of transport operations within the Community;
- ensure that the treatment of motor vehicle operators engaged in transport within the Community from other Partner States is not less favourable than that accorded to the operators of similar transport from their own territories.

Other inspiring regional agreements on harmonisation of motor vehicle registration and licensing are the Tripartite Agreement on Road Transport and the Protocol on EAC Common Market.

Motor vehicle registration and licensing is a matter of major concern for the Community and the Partner States, in particular, if they want to realize the above mentioned commitments. Presumably, it is partly for this reason that the Client required the Consultant to, among other things, review the laws applicable in the Partner States on motor vehicle registration and licensing with a view to improving and harmonizing them.

The Consultant has undertaken this task by reviewing all the principal traffic laws and the subsidiary legislation applicable in the Partner States and identified areas of convergences and divergences and recommended the way forward. Harmonization in this area will be fully realized in the Community if there is a single and common law on vehicle registration and licensing applicable in all the Partner States. Accordingly the Consultant has proposed draft legislation "East African Community Motor Vehicle Registration and Licensing Act 201_"

2. OBJECTIVES AND METHODOLOGY

The overall objective of the work-package in this part of the Consultancy was to review the existing laws and regulations applicable in the Partner States concerning motor vehicle registration and licensing with a view to propose areas for improvement and harmonization. In the final analysis, it was expected that the Consultant would propose draft legislation on motor vehicle registration and licensing that would apply in the whole region. In order to realize this objective the Consultant employed a participatory methodology that is involved experts and stakeholders in proposing what the draft legislation should contain. Our approach is outlined below.

2.1 Collection of Relevant Legislation

During this stage the Consultant collected the key legislation applicable in each Partner State on vehicle registration and licensing. The collection targeted both principal and subsidiary legislation (regulations). The collection of documents was encumbered with a number of problems including non-availability of the documents, difficulty in securing them at the right time and having the documents in a language other than English.

2.2 Detailed Review of the Documents

The principal and subsidiary legislation collected from each Partner State was closely reviewed with a view of comparing it with laws from other Partner States. Basically, this review was done on a comparative basis with focus on areas of convergence and divergence. This desk review was beefed up with searches done on websites of the relevant institutions under review.

2.3 Experts' Workshops

The Consultant collected views and suggestions from various experts on the subject. The views and suggestions were collected from experts' workshops conducted in each Partner State. In the workshops findings of the desk review of the documents were presented and the experts were able to comment on the validity of the findings and suggest ways on how to improve them. Accordingly, additional documents for further review were recommended in the workshops. This paved way to the Consultant to start drafting the common law on motor vehicle registration and licensing to be applied in the Community.

2.4 Task Force Meeting

The EAC Secretariat organized a five days' Task Force meeting in Dar es Salaam in September 2011 to review the Working Papers on the various thematic areas of the Consultancy. Invaluable comments and inputs were received from this meeting which helped to shape the content, findings and recommendations of this Working Paper.

2.5 Stakeholders' Workshop

Stakeholders' workshop was held in Mwanza in May 2012. Participants from all partner states and Zanzibar scrutinized the report including the proposed law with a view to harmonize motor vehicle registration and licensing in the Community. Based on the stakeholders' views the Consultant prepared the final version of the proposed law. The draft legislation included in this report is ready for further consultation by professionals and experts in road transport and related activities and the law making organs.

3.0 REVIEW OF MOTOR VEHICLE REGISTRATION LAWS

3.1 Burundi

Principal Legislation (Act No.1/04 of 2009 on Domestic Road Transport)

The principal legislation on registration of motor vehicles in the Republic of Burundi is the Act on Domestic Road Transport of 2009. The Act strictly applies to domestic transport covering transport by motor vehicle travelling on the national network whether classified or otherwise. International transport is supposed to be regulated by bilateral or multilateral agreements between Burundi and the other countries. Article 1 of the Act defines domestic road transport, its organization, functions and other related matters. The full implementation of the Act is operationalized by regulations in form of Ministerial Ordinances or Presidential Decrees made by the Minister in charge of the transport portfolio and the President respectively.

Registration Process

Part III Chapter III of the Act deals with the registration of motor vehicles. Article 65 of the Act stipulates any owner of a motorized vehicle used in the territory of Burundi must hold a registration card whose characteristics or particulars shall be prescribed in an ordinance made by the Minister. The registration card shall, among other things, include the vehicle identification marks together with the plate number. The Minister through regulations shall specify the physical characteristics of the plates.

Moreover, Article 68 requires the Minister to establish and maintain a computerized data base of motor vehicle registration for the entire national fleet. The data base should cover all kinds of information in respect of registered motor vehicles including, acquisition, suspension, transfer and decommissioning of the vehicles. This data should be made available and accessible to all public service departments, such as, the Statistics, Tax, Police, Public Prosecution and the Courts as well as, to any interested person who requests for it. According to Article 67 the registration function is placed in the Ministry in charge of transport services. The Article partly reads that, “registration and grant of the plates of the vehicles used on the national territory is within the remit of the Ministry in charge of transport services. But in practice registration is done by the Director of Motor Vehicle Licensing under the Commissioner of Domestic Taxes and Non-Fiscal Revenue within the Burundi Revenue Authority. The registration fees include number plate and registration card fee.

Imported Vehicles and Garages

Chapter III of Part V of the Act requires that all motor vehicles imported in Burundi should meet all safety and environmental requirements and that steps be taken to prohibit use of motor vehicles which do not meet norms of the Traffic Code especially vehicles engaged in the provision of business public transport (Article 135). All imported motor vehicles require clearance of Interpol before they are registered.

At the same time Article 138 provides for the registration of garages. The registration is done subject to the conditions of registration specified in Articles 137 and 139 of the Act. The operator of a garage must meet safety and environmental requirements in addition to qualities based on professional integrity, financial standing and professional competence as may be specified in an order made by the Minister. Registration of garage operators supposedly includes registration of motor dealers as they are known in other Partner States.

Road Worthiness

Under Article 61 any motor vehicle permanently or temporarily registered in Burundi must pass a compulsory period road worthiness test performed by competent persons who possess the appropriate equipment in order to accomplish this function. Persons or service providers in respect of motor vehicle testing shall be designated by the Minister in charge of transport. The test shall be conducted depending on the type and use of the motor vehicle. A test card shall be issued to certify the road worthiness of a motor vehicle. In one of the Task Force Meetings, it was submitted that Burundi does not register more than 7 years old age motor vehicles.

Penal Sanctions

Like any other law on road traffic, the Act provides for criminal sanctions for violation of the provisions of the Act under Part VI. Enforcement of the Act is entrusted to the Police but the penalties are determined by a Ministerial Order made and signed jointly by Ministers in charge of finance, transport, internal security and justice.

Subsidiary Legislation

Under the Act the Minister enjoys enormous powers and functions to make regulations as delegated to him by the various provisions of the Act. For example, the Minister is empowered to make regulations under Articles 65 (registration card for motorized vehicles), 66 (registration plates), 139 (conditions for registration and licensing of garages) etc. It is, therefore, proper to say that much of the law on registration of motor vehicles in Burundi is also contained in the subsidiary legislation. It is worthy noting that to-date the Minister has passed Ministerial Decree No. 100/70 of 2008 on the renewal of registration of motor vehicles and Ministerial Ordinance No. 730/107 of 2001 on the introduction of compulsory road worthiness control.

A review of the law on motor registration in Burundi clearly shows that this law shares more or less the same attributes with laws on motor registration in other Partner States. The difference may lie on the intensity and probably, coverage of matters that are inherent in motor vehicle registration.

3.2 Kenya

General Observations

The principal legislation here is the Traffic Act, Cap. 403 of the Laws of Kenya. As in the case of Tanzania and Uganda, the provisions concerning registration of motor vehicles and trailers are carried mainly in Parts II and III of that Act as narrated below in the present review.

Officers and Their Functions (ss. 3 and 5)

This section requires the Minister [responsible for road traffic] to, by notice in the Gazette, appoint a Registrar of Motor Vehicles to be responsible for, among other things, the registration of motor vehicles and trailers and the keeping of related records required by the Act. It also requires the Minister to, by notice in the Gazette, (a) appoint such licensing officers, (b) a certifying officer for the examination of vehicles in accordance with the provisions of the Act; and (c) such inspectors, as may be necessary for the carrying out of the provisions of the Act. Presently, registration is done by the Kenya Revenue Authority (KRA) which is under the Ministry of Finance. Thus, like in Burundi the registration function has migrated from the Ministry responsible for transport to that responsible for revenue.

Prohibition of Use of Motor Vehicles without Registration Certificate (s. 6 (1) and (4))

This section prohibits possession of a motor vehicle/trailer, other than one exempted from the provisions of the Act, unless the same is registered under the Act. It also prohibits the registration of any commercial vehicle/trailer whose load capacity has not been declared by the manufacturers of the chassis until an inspector has determined its load capacity and his determination shall be final. Kenya does not register motor vehicles which are more than 8 years old. The Kenya Bureau of Standards was responsible for imposing this restriction and it is this Bureau which certifies the age of imported motor vehicles at the port of entry before the registration is effected by the KRA.

Classification of Motor Vehicles (s. 4)

This section divides motor vehicle into ten (10) classes by name: motor omnibuses; heavy commercial vehicles; commercial vehicles; tractors; motor cars; motor-cycles not exceeding 50 cc engine capacity; motor cycles exceeding 50 cc engine capacity; invalid carriages; special types of motor vehicles for which special authorization is required from the Registrar before such vehicles can be registered or used on a road; and matatus.

Application for Registration of Motor Vehicles and for duplicate registration book and related matters (ss. 6 (2), (5), (6), and (7))

This matter is covered under section 6 which, among other things, requires application for the registration of any vehicle to be made to a licensing officer in the prescribed form accompanied by the prescribed fee.

The licensing officer, upon being satisfied with the fulfilment of the application for registration requirements, is required to assign the vehicle a registration number, which is to be its identification mark; to forward particulars of the vehicle to the Registrar, who shall enter them in his records and shall issue to the vehicle owner a registration book, which book, or a duplicate thereof, shall be proof of the registration of the vehicle.

Where the registration book has been lost, destroyed or defaced or its particulars have become illegible, the owner is required to apply in the prescribed form for a duplicate thereof, and the Registrar, if satisfied as to such loss, destruction, defacement or illegibility, shall, upon payment of the prescribed fee, issue a duplicate registration book. Any lost registration book which is subsequently found is to be forthwith returned to the Registrar for cancellation.

The owner of any vehicle is required to inform the Registrar of any change in circumstance which affects the accuracy of the particulars of the vehicle and to forward to him the registration book for its amendment together with the prescribed fee as well as to supply to the Registrar any further information which may be required.

Procedure of Registration of Motor Vehicles (ss. 6 (8) and 10)

The licensing officer may, however, refuse to register a motor vehicle/trailer if he has reason to believe that the vehicle/trailer is or may be of a type not previously registered under Part II of the Act, or is of a type so registered but constructed according to different specifications until plans or specifications thereof have been submitted to and approved by the Registrar.

The licensing officer is, under s. 10, prohibited from registering a motor vehicle unless the owner satisfies him: that the vehicle has been lawfully exported from its country of origin or the country in

which it was last registered, and that such owner is in possession of any export permit in relation to the export thereof required by the country of origin or of last registration; and that the vehicle has been lawfully imported into Kenya. Before registration, a motor vehicle may also be required to undergo vehicle examination by an inspector in order to satisfy himself that the vehicle is in a fit and proper condition for the purpose for which it is to be used.

General Certificate of Registration for Dealers

There are no specific provisions for this item in the Kenya Act as is the case for the case of Tanzania.

Certificate of Registration to be carried in Motor Vehicle and Notification of Changes (s. 13; s. 13)

The owner of a vehicle/trailer is required to, when required by a police officer, to produce for inspection, either immediately to the police officer or within five days of the request, at a police station nominated by the owner, the relevant registration book. There may appear glaring differences between the position under the Tanzania Act and that of Kenya but this is in terms of details only; the essentials are similar and have generally similar result.

Identification Marks (s. 12)

The use of a motor vehicle/trailer registered under the Act or driven under the authority of a general dealer's licence is prohibited unless there is fixed thereto in the prescribed manner (or suspended from the vehicle under general dealer's licence) the prescribed number of identification plates of the prescribed design and colour on which is inscribed the identification mark of the vehicle or of the general dealer's licence. A private motion has been tabled before the Parliament seeking to amend the Act by requiring persons who dispose of their motor vehicles to surrender the number plates to the Registrar of Motor Vehicles.

Presumption and Change of Ownership (ss. 8 and 9)

The person in whose name a vehicle is registered, unless the contrary is proved, is presumed to be the owner of the vehicle. The use of a motor/vehicle whose ownership has been transferred by the registered owner for more than 14 days after the date of such transfer, unless the new owner is registered as the owner thereof, is prohibited. The registered owner of a motor vehicle/trailer whose ownership has been transferred is required to, within seven (7) days from the date of the transfer, inform the Registrar in the prescribed form of the name and address of the new owner and deliver to the new owner the relevant registration book. And the new owner is required to, after inserting the particulars of the change of ownership, forward the registration book with the prescribed fee to the Registrar, whereupon the vehicle shall be registered in the name of the new owner who is to have either the old registration book accordingly altered or a new registration book. Where the registered owner has failed to comply with these provisions owing to his death, having left Kenya or not being traced or refusal to comply with the provisions, the Registrar may cause the vehicle to be registered in the name of the new owner. There are special exemptions for cases of temporary hiring of vehicles and any change of possession of a vehicle which occurs by reason of seizure under hi-purchase agreement.

Exemption from Registration (s. 11)

The responsible Minister is empowered to, by notice in the Gazette, exempt any vehicle, class or description of vehicle from the provision in Part II of the Act requiring registration of vehicles/trailers. Vehicles exempted from registration under this part include vehicles owned by the Government; municipal councils, the military (Navy, Army and Air) etc.

Offences and Penalties (s. 14)

Any person who contravenes or fails to comply with any of the relevant provisions shall be guilty of an offence and liable on first conviction to a fine not exceeding KShs 1,000.00 or to an imprisonment term not exceeding three months, and on subsequent conviction to a fine not exceeding KShs 2,000.00 or an imprisonment term not exceeding six months or to both.

Use and Suspension of Registration and Surrender of Certificate of Registration

No provision equivalent to section 39 of the Tanzania Road Traffic Act.

General Observations

The format of the general subsidiary legislation, the Traffic Rules, generally follows that of the principal legislation reviewed above, except for the order in which the matters covered under Rules are presented. In order to maintain a level of consistency, we follow the order in which matters under the Act are presented above in so far as it is applicable; for some of the matters under the Rules do not feature significantly under the Act. A short rendition of the relevant Rules follows below.

Registration of Motor Vehicles/Trailers and Related Matters (Part II, rs. 6-9)

This Part in rules 6-9 makes elaborate provisions for registration [and licensing] of motor vehicles in furtherance of the provisions in the principal Act.

Identification Marks (rs. 6 and 7)

This Rule elaborates section 6 (5) of the Act by requiring the identification mark of a vehicle assigned under that subsection to include the letter(s) indicating the place where the vehicle is registered as prescribed by the Registrar and a number that shall be assigned to the vehicle by the licensing officer. It requires the inclusion of the letters K.Q. and a number to be assigned by the Registrar in an identification plate issued to a dealer with a dealer's general licence under relevant provisions of the Act.

Rule 7 (Identification plates) stipulates the provisions to apply to identification plates carried in pursuance of the relevant provisions of the principal Act and to plates carried for use under a dealer's general licence. Briefly, these stipulated provisions in respect of such plates are with regard to their: shape; number and positioning; positioning angle at the rear (for vehicles) and back (for trailers); the ground colour and the colours of letters and numbers thereon of every dealer's general identification plate; size in height, length and total width of the space of every letter on identification plate; etc. It requires every vehicle to be fitted with reflective plates unless it is being driven under the authority of a dealer's general licence; and the owner of every vehicle/trailer which is not, on 1st June, 1974, fitted with reflective plates to, on the first occasion thereafter upon which an application is made for a licence for the vehicle/trailer, inform the licensing officer accordingly and apply for the issue of reflective plates to him.

It recognizes as valid only plates which are issued by or on behalf of the Registrar and bear the mark of authorization set out in the Eleventh Schedule to the Rules. It requires that fees payable for plates in this respect shall be as prescribed in the First Schedule to the Rules. Moreover, the manufacturing or selling of reflective number plates must be with the written authority of the Registrar of Motor Vehicles.

It also provides for criminal sanctions for violation of the requirement of fitting every vehicle/trailer with reflective plates. It permits simultaneous exhibition of identification plates carried as prescribed by the law of Burundi, Ethiopia, Rwanda, Somalia, Sudan, Tanzania, Uganda, Zaire (Democratic Republic of Congo) or Zambia for vehicles registered in any of these countries, in addition to being registered under the Act, and those carried pursuant to the relevant provisions of the principal Act.

Authorization Permits (r. 7A)

This rule provides for foreign vehicles brought to Kenya. It requires any person who brings a foreign vehicle to Kenya by road or by other means to report its presence to a licensing officer at the nearest point of entry or at any Government office where licences are normally issued and to submit an application in the prescribed form for an authorization permit, together with the foreign vehicles registration book. It enlists the following as points of entry and exit in question: Lunga Lunga, Taveta, Namanga, Isebania, Busia, Malaba, Mandera, Moyale, Liboi, Keekorok, Oloitokitok, Lwakhakha, Kilindini, Lamu and Lokichogio.

It authorizes the licensing officer, in the case of private vehicles, to issue to the applicant free of charge a seven days authorization permit. If the owner desires to keep the vehicle in Kenya for a longer period and there is then not in force in respect of the vehicle an international certificate, the Registrar may issue to the owner a new licence for the vehicle on production of the authorization permit and payment of fee prescribed in the First Schedule. No such fee or any part thereof shall be refundable to the owner if he takes or sends the vehicle out of Kenya before expiry of the licence, and that, on expiry of the licence, the vehicle shall, on application by the owner, be registered and licensed in Kenya, or shall be removed from Kenya.

For a foreign commercial or public service vehicle (excepting those owned or operated by KENATCO) in respect of which there is not in force an international certificate, the licensing officer may, on payment of the appropriate fee under the First Schedule, issue an authorization permit in the prescribe form valid for a period not exceeding 30 days. On the expiration of the period, the owner is to apply for the registration and licensing of the vehicle in Kenya or to remove it from or send it out of Kenya. The Registrar may, on payment of the appropriate fee, issue a further authorization permit for a further period of 14 days to enable the owner to finalize arrangements for inspection of the vehicle or for its removal from Kenya, or to complete customs formalities. When removing the vehicle from Kenya, the owner is required to produce to the licensing officer at the nearest point of exit the authorization permit or licence. If the permit/licence has expired, a fee proportional to the initial fee paid for the permit/licence shall be payable for each day the vehicle has been in Kenya after expiry of the permit/licence.

Violation of the provisions of this rule attract to the offender: a fine not exceeding KShs 2,000.00 or imprisonment term not exceeding six (6) months or both; for second or subsequent conviction, a fine not exceeding KShs 5,000.00 or imprisonment term not exceeding one year or both.

Exemption from Registration (and licensing) (r. 9)

This rule exempts from the requirements of registration certain classes of vehicles, including those belonging to the President as his/her property, those owned by the armed forces, vehicles owned by the authority of a dealer's general licence; etc.

3.3 Rwanda

Principal Legislation

The principal legislation here is the decree which "regulates traffic on the public highway, of pedestrians, of vehicles and loaded or mounted draught animals, and livestock." The relevant provisions are in Part 5 dealing with vehicle identification, vehicle registration, registration certificate, registration numbers, distinctive sign and identification marks, renewal of plates and registration certificates, placing and legibility of registration plates and of distinctive sign, vehicles registered outside Rwanda and taxes. Although the chapters are many, each contains one or two Articles providing for specific matters falling under the chapter in question. The rest of this review provides necessary details.

Chapter 1. Vehicle Registration

Article 121 sets up five "registrations categories" of motor vehicles, trailers and semi-trailers, excepting light trailers (according to owner's accreditation attribute!), (a) private vehicles; (b) diplomatic missions' and vehicles of organisations which are beneficiary of a diplomatic community in tax and customs matters as well as those of their members; (c) vehicles of the Central Administration, of the Decentralised Public Services, and of State projects; (d) vehicles of the Armed Forces; (e) vehicles of the National Police; and (f) vehicles on a temporary import regime. Further, Article 121 places the responsibility of keeping the registry of private vehicles, of vehicles with temporary registration and that of diplomatic missions and of organisations beneficiary of immunity regime in the Tax Department. In Rwanda therefore registration of motor vehicles is a statutory function that lies with the Tax Department within the Rwanda Revenue Authority. It also places the responsibility of keeping of each of the other registries in one or several authorities especially appointed by the President of the Republic.

Article 122 prohibits movement on the public of vehicles referred to in Article 121 unless they have been first registered on the request of and in the name of the person who uses them for his own purpose or who exploits them either for being their owner, or for having them at his permanent or habitual disposal by hire or other convention. It exempts from the requirement of their registration in Rwanda the –

- vehicles which are imported therein temporarily by persons who are not habitual residents and which are provided with a registration number issued by Authorities of a country which has adhered to the Vienna Convention of 8 November 1968 relating to Road Traffic, as well as with the identification sign referred to in the said Convention.

- Within a period not exceeding 12 months, vehicles imported in Rwanda by its resident persons or having to be resident therein habitually and provided with a registration number and with a distinctive sign meeting the mentioned conditions.

Article 123 requests for registration of private vehicles belonging to diplomatic missions or to organisations beneficiary of an immunity regime or members of these missions and organisations to be addressed to the Tax Department. The request is to be accompanied-

- For a new vehicle: with a certificate of the manufacturer or of the distributor attesting that the vehicle has been supplied in a new state and mentioning: (i) the kind of vehicle; (ii) the make or the name of the manufacturer; the type of vehicle; (iii) the number of the vehicle chassis; (iv) the number of the vehicle's engine; (v) the engine capacity; (vi) the moving weight of the vehicle; (vii) the maximum authorized weight of the vehicle; (viii) the maximum number of passengers; (ix) the manufacturing year of the vehicle.

- For a second hand vehicle: (i) when the vehicle has been registered in Rwanda, the request is to be accompanied with a registration certificate issued on the occasion of the previous registration; (ii) when the vehicle has not yet been registered in Rwanda, the request is to be accompanied with a list of the vehicle's characteristics as shown in para. 1 of this Article.

- According to each case, a request is also to be accompanied with a copy of use state or of temporary import.

Vehicles of the Central Administration and of the Decentralised Public Services as well as vehicles of the Armed Forces are respectively to be registered by the Authorities who manage them and who are to inform the Tax Department on the characteristics of each vehicle and on the identification attributed to it. Rwanda is conducting a study to determine at what point a vehicle will be deemed to be too old for importation into Rwanda. It is considering adopting vehicle aged 8 years or more.

Chapter 2: Registration Certificate

Article: 124 requires the registration of a private vehicle or of a vehicle belonging to a diplomatic mission or to an organisation beneficiary of an immunity regime or to members of these missions and organisations is to be made by the issue of a registration certificate of yellow colour, according to the model shown in Annex II of this Decree. It also requires notification of the Tax Department within 8 days if the motor vehicle changes ownership. Notification can be made orally or by registered letter and the registration certificate must be surrendered to the Department. It also requires change of the previous name in favour of the new owner on payment of the prescribed fee.

3.4 Tanzania

3.4.1 Tanzania Mainland

Principal Legislation

In Tanzania, vehicle registration and related matters are provided in several Parts of the Road Traffic Act, 1973 Cap. 168 R.E. 2002. As is to be found in the cases of Kenya and Uganda, the preliminary provisions in Part I of the legislation cover vehicle registration in terms of establishing the administrative machinery characterized by appointment of officials for the registration of vehicles and related matters.

Administration: Officers and Their Main Functions (ss 4-7)

In the case of Tanzania Mainland, the Minister for the time being responsible for finance is given power to, by notice in the *Gazette,* appoint a Registrar of Motor Vehicles and, in a similar manner,

Deputy Registrars of Motor Vehicles for such parts of Tanzania as may be specified in the notice (s. 3). Other offices, such as, vehicle inspectors and examining officers are appointed by the Ministry responsible for road traffic. So, like in Rwanda, in Tanzania registration of motor vehicles is a function vested in the Ministry in charge of revenue and discharged by the Tanzania Revenue Authority (TRA). Nevertheless, Tanzania is in the process of establishing the Driver and Vehicle Examination and Licensing Authority (DVELA) under the Ministry responsible for transport. DVELA would, *inter alia,* inspect, test and register motor vehicles, issue vehicle registration certificates and maintain registers containing particulars of licensed motor vehicles. The passage of the proposed Road Traffic and Safety Act will eventually transfer the registering function from TRA to DVELA under the Ministry in charge of transport.

The principal functions of the Registrar is to keep in the prescribed form registers of all vehicles and trailers, and to cause all Deputy Registrars to each keep registers of all motor vehicles and trailers registered by him. Such registers are to be open for inspection (free of charge) on demand by a police officer and members of the public upon payment of the prescribed fee. (ss. 5 and 6). Upon payment of the prescribed fee, certified copies of any entry in the registers shall be given to an applicant for it (ss. 6 and 7).

Registration of Motor Vehicles and Related Matters (Part II, ss. 8 – 17)

This section prohibits and penalizes the use any of any motor vehicle or trailer, other than exempted ones, unless such motor vehicle or trailer is registered as prescribed by the Act.

Classification of Motor Vehicles (s. 9)

For the purpose of registration, this section provides for classification of motor vehicles and trailers in such classes as may be prescribed by regulations made by the Minister for the time being responsible for finance.

Application for registration of motor vehicles (s. 10)

The section requires application for motor vehicles/trailers to be made in the prescribed form by the relevant owner who, in order to be registered as owner, should normally not be under the age of 18 years, or (except through a trustee) of unsound mind.

Procedure of Registration of Motor Vehicles, etc. for non-dealers (s. 11)

This refers to verification by the Registrar of the particulars in the application for registration and ensure that the subject motor vehicle/trailer is in a fit proper condition for its intended (use purpose); that it has been lawfully exported from its country of origin or the country in which it was last registered; it has been lawfully imported into Tanzania; that any tax or duty due in respect of it under any law has been paid.

Upon being satisfied with the particulars, the Registrar is required to enter the same in his register and to assign the motor vehicle/ trailer identification marks to be shown on the registration plates to be affixed to the motor vehicle/trailer in the prescribed manner, and to issue to the applicant a certificate of registration in the relevant prescribed form. The condition imposed by Kenya that a motor vehicle whose age is more than 8 years cannot be registered in Kenya was highly disputed by the Experts' Meeting held in Dar es Salaam. To them, age was not an issue as long as the motor vehicle was properly maintained and serviced in compliance with law. Yet an official from SUMATRA observed that SUMATRA had met official of the Tanzania Trucks Association (TATOA)

and agreed in principle that members of TATOA should not import trucks which are more than 8 years old. For motor vehicles above 10 years Tanzania collects an old age penalty.

In cases of ownership being in two or more persons, the registration is to be in the names of all the owners, and not under any business name or the name of any unincorporated body, unless the owner is a society registered under the Societies Act, in which case the society may be registered as such owner.

General Certificate of Registration for Dealers (s.12)

It is provided, among other things that a general certificate of registration in respect of all vehicles/trailers used by a dealer applicant for registration of the vehicles/trailers used by him for such purposes as may be prescribed may be issued to him, subject to such conditions as he may prescribe.

Certificate of Registration to be carried in Vehicle/Trailer (s. 13)

This section requires every person driving or being in charge of any motor vehicle/trailer to carry with him the relevant original certificate of registration or duplicate copy thereof duly authorized by the Registrar and to produce it for inspection by any police officer/vehicle inspector on demand.

Identification Marks (s. 14)

The section criminalizes failure to fix or to fix improperly identification marks or any of them without cause and fixing non- prescribed identification marks. It prescribes notification, by the registered owner, to the Registrar with whom the vehicle/trailer is registered, of the breaking up/destruction of any registered vehicle or if such a vehicle is being sent permanently out of Tanzania.

Presumption of Ownership and Need for Notice of Change of Ownership (ss. 15 and 16)

The presumed owner of a motor vehicle/trailer, unless the contrary is proved, is the person in whose name it is registered. Where there has been sale or any other disposition whatsoever of any registered vehicle/trailer, the person selling or disposing of it is required to, among other things, notify the Registrar in the prescribed form, accompanied by the prescribed fee, of the sale/disposition, the name and address of the owner, etc., and to deliver the relevant registration certificate to the Registrar.

Exemption from Registration (s. 17)

The Minister is empowered to, by notice in the *Gazette,* provide for the full or partial, and for conditional or unconditional, exemption of persons or their motor vehicles/trailers or any class of persons or of their motor vehicles/trailers, from all or any of the requirements of this Part or of the regulations.

Offences and Penalties (ss. 8(2), 11(3), 13(2), 14(5), 18 and 113)

There are several provisions concerning offences and penalties therefore in the Act regarding registration of motor vehicles/trailers and related matters. Two of these (18 for Part II and s. 113 for Part for the rest of the Act) are of a general nature and deal with criminal sanctions, including penalties, against violations of various provisions in Part II in respect of which no specific sanctions are prescribed.

Use and Suspension of Registration and Surrender of Certificate of Registration (s. 39)

Section 39 (8) provides for the power of the court in a proper case of notorious violation of the specified provisions regarding conditions of a motor vehicle/trailer registered under the Act for use on road to order the Registrar to suspend the registration of the vehicle/trailer for a period not exceeding 12 months. And, in such event, the vehicle/trailer owner is to surrender the relevant certificate of registration to the Registrar. The Registrar is then to retain it in his custody until after the expiration of the suspension when he is to return it to the owner.

Section 39(10) empowers the Registrar to register the new owner as the owner of the motor vehicle/trailer whose registration is suspended under this section or any other provisions of the Act where he is satisfied that the ownership of the vehicle has passed to some other person by lawful means or operation of law and that the vehicle/trailer is in good repair and in efficient working order, etc.

Power to Make Regulations (s. 114)

This section makes general provisions granting power to the Minister to make regulations, some of which relate to registration of motor vehicles/trailers.

3.4.2 Zanzibar

For the case of Zanzibar registration of motor vehicles is done by the Zanzibar Revenue Board, although the Road Transport Act No. 7 of 2003 invests that function in the Minister responsible for transport and particularly the Director for transport within the Ministry. The Director is conferred with the title of Principal Road Transport Authority and, in that capacity, he is required to register and keep registers for all motor vehicles and trailers registered in Zanzibar. The powers and functions of this Authority and his assistants are provided for in Part II of the Act.

The process of registration of motor vehicles and trailers is provided for in Part IV of the Act. Basically, this process closely follows the process discussed under the Tanzania Mainland legislation.

3.5 Uganda

General Observations

In Uganda, the law governing registration of vehicles/trailers is to be found in the first three Parts of the principal legislation, the Traffic and Road Safety Act, 1998 (Cap. 361 of the Laws of Uganda): Part I, “Preliminary” provisions (ss. 1 – 2); Part II, Administration (ss. 3 – 9), and Part III, Registration [and licensing] of motor vehicles, etc. (ss. 10 – 34).

Administration: Officers, Their Main Functions and Related Matters (Part II, ss. 3 – 9)

The Minister, to whom functions under the Act are assigned as per the interpretation section 2 of the Act and subject to any written law relating to the appointment of persons to the public service, is required to, by notice in the *Gazette*, designate a public officer as chief licensing officer of motor vehicles. The said Minister is empowered to, by notice in the Gazette, designate one or more public officers as deputy chief licensing officers of motor vehicles for such parts of Uganda as shall be specified in the notice. Any of such designations must be effected in consultation with the Minister responsible for internal affairs. Under the Act, the Minister means the Minister to whom functions under the Act are assigned. In reviewing the Regulations made by the Minister under section 179

(2) it appears that this function has been assigned to the Minister responsible for works and transport.

In addition, there shall be appointed: (a) licensing officers; (b) vehicle inspectors; (c) examining officers; and such other public persons as may be necessary for carrying out the provisions of the Act.

All licensing officers and all vehicle inspectors are required to be under the direction of the chief licensing officer. On the other hand, the chief licensing officer is required to be subject to the overall control of the Minister on matters of policy and to comply with any direction on such matters given by the Minister.

The chief licensing officer is required to keep in the prescribed form: registers of all motor vehicles, trailers and engineering plant registered in Uganda; and (b) registers of registration plates and licences issued for motor vehicles, trailer and engineering plant, and to cause every licensing officer to keep registers of all motor vehicles, trailers and engineering plant registered by him/her and registration plates and licences issued by him/her.

All registers in the custody of the chief licensing officer and licensing officers are to be for inspection by members of the public during prescribed hours upon payment of the prescribed fee. Moreover, upon payment of the prescribed fee by an applicant, the chief licensing officer is required to furnish the applicant a certified copy of any entry in any register. And the facts contained in the copy of any entry in a register, which is certified under the hand of the licensing officer to be a correct copy, are declared to be *prima facie* evidence in all court proceedings.

Prohibition of Use of Vehicles without Registration (ss. 10)

This section prohibits possession of a motor vehicle, trailer or engineering plant, other than a motor vehicle, trailer or engineering plant exempted from the provisions of the Act, without registration under the Act. The registration is carried out by the Uganda Revenue Authority (URA). Thus, like in Burundi, Kenya and Zanzibar this function has been hived-off the Ministry responsible for transport and moved to a Ministry in charge of revenue.

Classification of Motor Vehicles, etc. (s. 11)

This section classifies motor vehicles, trailers and engineering plant into 12 categories: (a) heavy goods vehicles; (b) heavy omnibuses; (c) heavy tractors; (d) medium goods vehicles; (e) medium omnibuses; (f) light goods vehicles; (g) tractors; (h) motorcars and dual-purpose vehicles excluding light goods vehicles; (i) engineering plant (j) motor cycles; (k) pedestrian controlled vehicles (l) trailers and semi-trailers

Application for Registration of Motor Vehicles (s. 12)

An application for registration of a motor vehicle, trailer or engineering plant is required to be made in the prescribed form by the owner thereof to a licensing officer and to be accompanied by the prescribed fee. The section permits, subject to the Act, any person, whatever his/her age, to be registered as the owner of a motor vehicle, tractor or engineering plant if he/she has legal capacity to own it. It further requires every application for the registration of a motor vehicle, etc. to be accompanied by or combined with an application for a licence and insurance for it.

Moreover, it prescribes every application for such registration to state the name and address of any person (other than the owner) in whom the ownership of the motor vehicle, etc. or any absolute or conditional right or licence to take possession of the same is vested or whether it is the subject of a hire-purchase agreement or a bill of sale or similar agreement. Such named person shall be recorded in the register and in the registration book as the proprietor of the vehicle, etc. and no change of proprietorship shall be recorded except upon his/her application or with his/her written consent.

The chief licensing officer is authorized to, by order in writing in the prescribed form, require that a person who is recorded as the proprietor of the motor vehicle, etc. and appears to him/her to be no longer the proprietor thereof, to show cause within 14 days after receipt of the notice, why the recording should not be cancelled. The chief licensing officer is also authorized to cancel the recording of the person as proprietor of the motor vehicle, etc. who fails to show cause as required by such order in writing.

The section also makes provision for transfers of title in hire-purchase agreement cases. It also declares that the chief licensing officer, any licensing officer or any other person concerned in the keeping of the register shall not be required to make any inquiry into the ownership or proprietorship of any motor vehicle, etc., beyond the particulars in the application notice, consent or any other document received by him/her under the Act and regulations. It requires him/her to be responsible only for making such entries in the register and upon any certificate in such a way as appear to be in accordance with those particulars.

Procedure of Registration and Registration of Motor Vehicles, etc. and Related Matters (s. 13(1) - (3) and (5)-(6); and s. 14)

Section 13 requires a licensing officer to, prior to the registration of a motor vehicle, etc., verify the particulars in the application for registration and to satisfy himself/herself about the following matters: the fitness of the motor vehicle, etc. for its intended use purpose in respect of which the licensing officer is required to send the motor vehicle, etc. to a vehicle inspector for examination; its lawful exportation from its country of origin or the country in which it was last registered, and that the applicant is in possession of an export permit for the same, other than a temporary permit, if that is required by the law of the country of its origin or last registration; the fact that the motor vehicle, etc. has been lawfully imported into Uganda; and that any tax or duty in respect of the motor vehicle, etc. under any written law has been paid. It was observed by a Uganda delegate that vehicles aged more than 8 years are not registered in Uganda.

On the other hand, the section prohibits the registration by a licensing officer of a goods vehicle/ trailer the body of which has not been made by the manufacturers of the chassis or the load capacity of which has not been declared by the manufactures until a vehicle inspector has determined its load capacity; and that the decision of the vehicle inspector shall be final.

Where a motor vehicle, etc. is owned by more than one person, the section requires that the registration be effected in the name of one of the owners nominated by all of the owners or, where the owners are the members of an incorporated body, by the governing body thereof. There is, however, prohibition of effecting the registration of a motor vehicle under a business name (whether registered or unregistered) or under the name of any unincorporated body.

Section 14 provides for registration of motor vehicles, trailers or engineering plant. It requires every owner of any of such properties registered under any enactment repealed by the principal Act to, on

the coming into force of the Act, reregister (and relicense it) in accordance with the Act, within such period and in such manner as may be prescribed.

Identification Marks and Related Matters (s. 13 (4) (7) and (8))

When satisfied as to the particulars of a motor vehicle, etc. contained in an application for registration, a licensing officer is required by the section to enter the particulars in his/her register and to assign the motor vehicle, etc. a number or mark to be shown on the registration plates and a registration book in the prescribed form for the motor vehicle, trailer or engineering plant. It was suggest in the Experts' meeting that vehicles registered in the region should bear the EAC log and we concur.

Moreover, the section declares that any of the following acts constitutes commission of an offence and liability, in the case of a first offence, to imprisonment of not less than one (1) year and not exceeding three (3) years ; in a case of a second or subsequent offence, to imprisonment of not less than two (2) years and not exceeding five (5) years: (a)making any registration plate which resembles a registration plate issued by a licensing officer; (b) knowingly having in one's possession a registration plate which resembles a registration plate so issued and which is likely to deceive; (c) using any registration plate so issued which is altered or defaced; (d) fraudulently or knowingly altering or defacing any registration plate so issued; or (d) fraudulently using, lending or permitting to be used a registration plate so issued and which is likely to deceive.

Indeed, the section provides further that, where a person is convicted of any such offence, the court shall, in addition to any penalty imposed, order forfeiture of any registration plate to which the offence relates and may also order forfeiture of any machine or equipment used in the manufacture of the registration plate and the closure of the workshop or factory concerned.

Presumption of ownership (cf. s. 9)

As indicated above the fact that section 9 declares to be prima facie evidence in all court proceedings of the facts contained in the copy of any entry in a register, which is certified under the hand of a licensing officer, to be a correct copy implies that ownership of a motor vehicle which is duly registered under the Act, is presumed to belong the person registered as the owner thereof.

Exemption from Registration (s. 32)

This section empowers the competent Minister, by statutory order, for a fixed period prescribed in the order, to provide for the exemption, either wholly or partially, and either unconditionally or upon conditions, of persons or of their motor vehicles, trailers or engineering plant or any class of such persons or motor vehicles, etc., from any of the requirements of this Part of the Act or regulations made under it.

Offences and Penalties (s. 33)

This section provides for offences and related respective penalties for violation of the provisions concerning, among others, (a) registration of motor vehicles, etc.; (b) registration plates and their use and manner of affixation; (c) registration books; (d) giving of prescribed information; and others related to these. It also defences in respect of certain of those offences when apparently committed while under indicated circumstances they had actually not been committed.

Power to Make Regulations (s. 34)

This section authorizes the making of regulations for the purpose, among others, of regulating the registration of motor vehicles, trailers and engineering plant; providing for the proper recording of particulars, registration books of vehicles, etc.; and prescribing anything to be prescribed under this Part of this Act.

3.6 Emerging Issues on Registration

3.6.1 Authorities for Registration of Motor Vehicles

Based on the review there is a big divergence among the Partner Stats in terms of the law and practice on registration of motor vehicles. Whereas the law in Burundi, Kenya, Uganda and Zanzibar entrusts the registration function to Ministries responsible for transport, in Tanzania and Rwanda the function is vested in Ministries responsible for finance/revenue. Thus, registration of motor vehicles by Tanzania Revenue Authority and Rwanda Revenue Authority falls squarely within the purview of the law.

Table 1: Comparative Provisions on Statutory Motor Registration Authorities

Name of Country	Legal Framework	Statutory Designated Registration Authority	Statutory Ministry in Charge	Current Registering Authority
Burundi	Act No 1/04 of 2009: Article 67	Officer: transport services	Ministry responsible for transport	Burundi Revenue Authority
Kenya	Traffic Act, Cap 403: Section 3	Registrar of Motor Vehicles	Ministry responsible for transport	Kenya Revenue Authority
Rwanda	Decree No. 85/01 Traffic Police and Road Traffic: Article 121	Tax Department	Ministry responsible for finance	Rwanda Revenue Authority
Tanzania	Road Traffic Act Cap 168: Section 3	Registrar of Motor Vehicles	Ministry responsible for finance	Tanzania Revenue Authority
Zanzibar	Road Transport Act 2003, Section 3	Director for Transport	Ministry responsible for transport	Zanzibar Revenue Authority
Uganda	Traffic and Road Safety Act, Cap, 361 Section 4	Chief Licensing Officer of Motor Vehicles	Ministry responsible for transport	Uganda Revenue Authority

There are contending views on this scenario which obtains in the Partner states. It was correctly contended by Kenya that all States in the EAC are importers of motor vehicles. As importers this function seems to have been traditionally regulated by the East African Customs (Management and Tarriff) Act, 1952. Under the Act all imported goods including motor vehicles were subject to control of the East African Customs and Excise Department. This Act was repealed and replaced by the EAC Customs Management, Act 2004. The functions of the Customs and Excise Department under the Act include, among others, to collect and account for Government taxes and revenue on international trade. Therefore, the establishment of revenue authorities in Kenya, Uganda, Zanzibar and Burundi seems to here gone hand in hand with the uploading of this function to the revenue authorities although the laws on motor vehicle registration provide to the contrary. This argument looks at registration of motor vehicles as a revenue function which can professionally be handled by

revenue authorities because of the advantage they enjoy in terms of expertise, resources (human and finance) and equipment/technology.

But strong sentiments were raised by some members of the Task Force against the delegation of this function to revenue authorities, since their primary concern is revenue collection rather than safety or road worthiness of the vehicles they register. Also, there is no evidence that consideration is given to the impacts of the licensing regime on transport efficiency (Nathan Associates Inc. April, 2011). But the argument on safety may be countered by the fact that in all the Partner States the law requires motor vehicles to be inspected or tested by motor vehicle inspectors to determine their roadworthiness before they are registered. Therefore, the problem is poor enforcement of the law in preference of revenue collection.

At the same time, a comparative study of road traffic laws in several commonwealth countries revealed that registration of motor vehicles is normally done by Ministries responsible for transport (see Appendix C to the Annex). Out of the 16 commonwealth countries reviewed herein only two countries (Tanzania and Rwanda) specifically invest this function in the Ministry responsible for finance.

On the basis of the advantages and disadvantages highlighted above, it is recommend that revenue authorities should only be left with the task of collecting the registration fees while the Ministries responsible for transport perform the function of registration after consideration of safety and transport efficiency issues.

3.6.2 **Age of Motor Vehicles**

The imposition of age on imported motor vehicles was highly debated in the Task Force Meeting. Some Partner States doubted whether this was the best approach to avoid dumping as Kenya claimed because there are many factors affecting roadworthiness of a motor vehicle. A properly maintained motor vehicle and which under-goes regular testing in accordance with the established criteria or rules can still ply on the roads regardless of the age particularly if it also complies with other technical and environmental standards such as those on emissions.

It was argued that in Tanzania, saloon cars and lorries owned by the Government have a life economic period of 5 and 15 years respectively. But this does not mean that such motor vehicles are totally useless and may no longer be put on use. They are normally sold to the private sector and they may be registered and licensed as long as they are maintained or repaired to meet the road worthiness standards set by the law. Besides, in Tanzania, the Tanzania Bureau of Standards (TBS) is equally involved in vetting roadworthiness of motor vehicles imported in Tanzania. TBS has set standards on emission related to concentration of carbon monoxide and hydrocarbons, otherwise there is no standard on age for the simple reason that even a 5 years' vehicle can still be not roadworthy if it does not under-go regular maintenance and testing to meet the established standards. Yet, Tanzania charges a fee for imported motor vehicles which are more than 10 years old.

Rwanda, on its part, underscored the establishment of motor vehicle testing centres for purposes of verifying road worthiness of not only imported but also motor vehicle already registered in Rwanda. The vehicles are tested regularly by these centres before they are registered and or licensed to operate in Rwanda.

It is evident from the review and the discussion in the Task Force that Partner States have through legislation or practice fixed vehicle ages in order to counter dumping and environment hazards thorough vehicle emissions. Burundi recommends 7 years, Kenya has 8 years law, Uganda and

Rwanda recommend 8 years while Tanzania has a 10 years' restriction beyond which a fee is charged. In this context 8 years age is recommended for adoption by all Partner States for purpose of harmonisation.

4. REVIEW OF MOTOR VEHICLE LICENSING LAWS

4.1 Burundi

A review of the Act on Domestic Road Transport of 2009 seems to suggest that Burundi does not require licensing and grant of a road licence the moment a motor vehicle is registered by the competent authority. Compliance with the registration requirements discussed in the previous part seems to entitle the registered owner to start using the motor vehicle in accordance with the purposes for which the motor vehicle is registered. It is only those who want to put the vehicle into business that they will be required to obtain an operator's licence as discussed later. However, it was made known during the Experts' Meeting that motor licensing is also mandatory in Burundi. Seemingly, this requirement is provided under regulation made by the Minister responsible for finance. Like with registration, the licensing is done by the Burundi Revenue Authority on payment of the prescribed fee which is calculated on the basis of the engine capacity. This fee is payable on a calendar year basis. Motor vehicles registered and licensed in between a year are charged a fee on pro rata basis.

4.2 Kenya

Principal Legislation

In Kenya vehicle licensing is regulated by the Traffic Act, Cap 403 which is also the principal legislation. The applicable provisions are found in Part III of the Act although there are also provisions on licensing found in Part II of the Act as dealt with in the previous Part on motor vehicle registration.

Preliminary Considerations

As mentioned in Chapter 3 section 3 of the Act empowers the Minister to, by notice in the Gazette, appoint a Registrar of Motor Vehicles who is charged with the following functions:-

- registration of motor vehicles and trailers;
- licensing of motor vehicles and trailers;
- licensing of drivers;
- keeping of records in relation to all the above.

At the same time section 3(2) empowers the Registrar to, by notice in the Gazette, appoint such licensing officers as may be necessary for carrying out the provisions of the Act. The Registrar and the licensing officers are invested with a number of obligations in Part II of the Act as far as registration of motor is concerned. In fact, all applications for registration of motor vehicles begin with the licensing officers who may register the vehicle although it is the Registrar who finally issues the registration book to the applicant/owner of the motor vehicle. As mentioned earlier, the Registrar in this case is the Kenya Revenue Authority.

Motor vehicles and trailers to be licensed-s.15

Section 15 prohibits any person to own or possess a motor vehicle or trailer or use it on a road unless it is licensed. However; the Registrar may consent to temporary non-use of the vehicle on the road if the owner or possessor gives notice to that effect to the Registrar. Meantime, the

Minister may exclude any motor vehicle from the licensing requirements. This exclusion has been done in the Regulations.

- the fee payable, and;
- the vehicle registration book.

Conditions for Issue of Licence - S.17 and 17A

A licensing officer shall issue a licence only if he is satisfied that:-

- the vehicle is duly registered;
- the particulars in the registration book are correct;
- the vehicle is insured against third party risks;
- that the licence in respect of such vehicle has not been cancelled under section 58(3). The cancellation may done by courts either because the vehicle is not roadworthy or it exceeds the load that it is permitted to carry (see ss 55 and 56).

There are addition conditions for licensing specified in section 17(2) as follows:

- the applicant must produce an inspection report showing that the motor vehicle or trailer has been examined by an inspector;
- the report should show that the vehicle or trailer complies with the provisions of the Act or any rules made there under.

The examination is done by making an application in the prescribed form coupled with the payment of the prescribed fee. Where the examination is successfully completed the inspector or certifying officer, as the case may be, shall affix to the motor vehicle or trailer an **inspection certificate** in the prescribed form.

Section 17A(3) prohibits use of a motor vehicle or trailer on the road unless it has a valid legible inspection certificate and in no way defaced or mutilated. On meeting all these conditions the licensing officer must issue the vehicle's licence. The licence according to section 18 must be in the prescribed form.

Fees and Duration of Licences – s.19

Licences other than dealers' general licence may be issued for such periods as may be prescribed in rules upon payment of the requisite fees. The holder of a licence may surrender it for cancellation to the Registrar and may be entitled to a refund as may be prescribed, that is 1/15 part of the 12 monthly fee for each completed calendar month remaining in the period for which the licence was issued. It is important to note that this fee is now paid in form of fuel levy.

No vehicle shall be used on the road unless it carries the licence in the prescribed manner. The licence should be legible and in no way defaced. If a licence is lost, defaced, mutilated or rendered illegible the Registrar shall issue a duplicate licence on payment of the prescribed fee. The lost certificate if found must be returned to the Registrar for cancellation.

A holder of a licence may apply for a new licence where he desires to use the vehicle for any purpose not authorized by the current licence or where the vehicle is altered so that a higher duty or a duty of different class is required, but the old licence must first be surrendered.

Dealers' General Licenses - s.23

A dealer's general licence may be issued to a dealer in, or manufacturer or repairer of motor vehicles upon application in the prescribed form and upon payment of the prescribed fee, such number of dealer's general licences as the applicant may require. For each such licence the Registrar shall issue two identification plates. But the holder of a dealer's general licence shall use the licence only in respect of vehicles in his possession, and shall not use more than one such vehicle under the authority of one licence at any one time.

Section 24 prohibits use of any vehicle on any road under the authority of a dealer's general licence:-

- to convey passengers or goods for profit or reward;
- to carry or convey any goods whatsoever except such load as may be necessary for the purpose of testing the motor vehicle or trailer.

If the motor vehicle or trailer is carrying load, for purpose of testing, no such load or part thereof shall be removed from the motor vehicle or trailer at any time between the departure from and the return to the loading place of the motor vehicle or trailer, save in the case of an accident. Section 24(1) (c) enumerates other ten instances in which a dealers general licence may be used without the written permission of the Registrar e.g.

- for test or trial during or after completion, construction, assembly or repair;
- for test or trial by or on behalf of an intending purchaser, or for proceeding to or from the place where the purchaser intends to keep it;
- for exportation to any territory in East Africa, the Sudan or Democratic Republic of Congo (Zaire);
- for proceeding to or returning from an exhibition of motor vehicles etc.

In Tanzania similar provisions appear in the Traffic Rules as amended in 2001. Section 24(3) and (4) create additional conditions for use of a vehicle on any road under the authority of dealer's general licence unless:

- the holder of the licence or a person duly authorized by him accompanies the vehicle;
- not more than two persons in addition to the driver shall be carried within or upon any such vehicle and such persons shall be limited to a prospective purchaser and his agent or a member of his family, and in the case of a vehicle proceeding to or from an accident, two mechanics.

Under section 24(5) the Registrar is required to provide a holder of a dealer's general licence with a book in which the holder shall on each occasion complete in duplicate the entries for which provision is therein made. One copy of such entries shall remain in the book and the other copy shall be carried with the vehicle during the journey to which such entries relate.

A dealer's general licence shall remain in force until the 31st December next following the date of issue, and it shall cease to be valid if the dealer ceases **to carry on business in the district** for which it is issued. When a dealer's general licence expires or is cancelled the holder of the licence must deliver to the Registrar the identification plates which were issued to the holder unless the holder makes an application for renewal and a new licence is issued in respect of the same identification marks.

Under section 26 of the Act the Registrar may at any time cancel a dealer's general licence for breach of the provisions of the Act or any regulation after serving a notice of cancellation. Any

holder of a dealer's general licence who is aggrieved by the decision of the Registrar may within one month from the date of service on him of the notice of cancellation appeal to a subordinate court of the first class. The holder of the licence may be entitled to a refund of his fee.

Section 27 restricts the use of a dealer's general licence to the purpose provided for in the Act and, in any case, it is not transferable or assignable to any other person without the authority of the Registrar. Where a licence is not obtained as required by this part a sum equal to the prescribed fee payable in respect of such licence shall be due and owing to the Controller of Inland Revenue. It shall constitute a civil debt recoverable by the Controller summarily.

Section 29 prescribes the penalties for any person who contravenes or fails to comply with the provisions of Part III of the Act. A first offender shall pay a fine not exceeding Kshs 1000 or imprisonment not exceeding 3 months. A subsequent offender shall pay a fine not exceeding shs 2000 or imprisonment not exceeding 6 months or both.

If the conviction is in connection with failure to pay a licence fee the court may order payment of the said fee in addition to any other penalty imposed on that person.

Subsidiary Legislation

Section 119 (1) of the Act empowers the Minister to make rules on, among others, all matters relating to the inspection, registration, licensing, regulation and control of vehicles and to the conditions which may be impressed in regard thereto. Pursuant to the powers granted to the Minister under this provision, the Minister has, *inter alia,* enacted the Traffic Rules, L.N. 84/1993 which provide for various matters. For purposes of this review the various matters are reflected in Part II of the Rules on Registration and Licensing of Vehicles.

Authorization Permits – R. 7 A

While Rules 6 and 7 apply strictly to registration of motor vehicles in Kenya, Rule 7A deals with aspects of licensing as provided for the principal legislation. Rule 7 A (1) requires any person who brings a foreign vehicle to Kenya by road or by other means to report the presence of such vehicle to a licensing officer at the nearest point of entry or at any Government offices where licences are normally issued. The person shall submit an application in the prescribed form for an authorization permit and this application must be accompanied by the foreign vehicle registration book. Rule 7A (2) mentions the points of entry and exit as: Lunga Lunga, Taveta, Namanga, Isebania, Busia, Malaba, Mandera, Moyale, Liboi, Kaekorak, Oloitokitok, Lwakhakha, Kilindi, Lamu, Loki chogio.

For a private vehicle the licensing officer may issue the authorization permit free of charge for a valid period of 7 days. But if the person wants to keep the vehicle in Kenya for more that 7 days but not exceeding 3 months and such vehicle does not have an international certificate the Registrar may issue a licence for such vehicle provided the owner produces the authorization permit and pays the prescribed fee. No refund of the fees is permissible if the owner decides to take or send the vehicle out of Kenya before the expiry of the licence. On expiry of the licence the owner has two options to, either register the vehicle and get it licensed or to remove it from Kenya.

In case of a foreign commercial or public vehicle which does not have a valid international certificate, the licensing officer may issue an authorization permit for a period not exceeding 30 days. On expiration of 30 days the owner should apply for registration and licensing of the vehicle in Kenya or remove it from Kenya. However, if the owner has not finalized arrangements for inspection

of the vehicle, or removal of it from Kenya or customs formalities the Registrar may issue a further authorization permit for a period of 14 days.

Manner of Carrying Vehicle Licence and Vehicle Certificate RR 8 AND 8A

Every vehicle licence and every certificate of fitness shall be carried on the vehicle on the nearside of the vehicle in front of the front seat, and facing either forward or to the nearside of the road. The licence should be carried in a conspicuous and reasonably vertical position behind the glass of the wind-screen or nearside window. Nevertheless, a dealer's general licence shall be carried on the front identification plate issued with the licence, in the holder provided for than purpose.

A licence should be removed as soon as it expires and be replaced with a licence of current validity. Rule 8 A requires every vehicle licence certificate issued under section 20 A of the Act to be carried on the vehicle in respect of which it is issued affixed to the identification plate.

Vehicles Exempted from Licensing – R. 9

Rule 9 (2) exempts the following vehicles from licensing under the Act:

- vehicles owned by the Government; municipal councils; urban and area councils, country councils;
- vehicles used solely as ambulances by the St. John Ambulances Association or by the Kenya Red Cross Society;
- vehicles owned and used solely by the Navy, Army and Air Force Institute;
- vehicles the property of any country, or of any consular representative of a country with which agreement exists with Kenya affording adequate reciprocity in the exemption of such vehicles from road traffic licensing;
- vehicles which are used solely on any road or other place to which the public have no general right of access;

Duration of Licences and Fees Payable under the Rules

According to the Traffic (Vehicle Licences) (Duration, Fees and Refund) Rules, 1992 a vehicle licence may be taken out for a period 12 months or for a period of 4 months. The period of 12 or 4 months shall commence from the beginning of the month in which the licence first has effect. The fees are prescribed depending on the duration of the licence, that is, whether it is for 12 or 4 months and, in addition, the fee depends on the 10 criteria set out in the Rules, namely:

- Fees for motor-cycles with or without a side car.
- Fees for three-wheeled vehicles not exceeding 500 kg tare weight.
- Fees for motor-cars-diesel or petrol depending on cc capacity.
- Fees for motor vehicles of any kind not otherwise specified in the Schedule to the Rules. The fee varies depending on the tare weight of the vehicle.
- Fees for trailers depending on tare weight.
- Fees for trailers which are drawn exclusively by licensed land tractors.
- Fees for land tractors.
- Fees for vehicles designed, constructed and used for the purpose of road construction, trench digging or any kind of excavation or shovelling work.
- Fees for vehicles designed and constructed as mobile cranes.
- Fees for public service vehicles, for each passenger which the vehicle is licensed to carry.

4.3 Rwanda

Principal Legislation

In Rwanda the law on vehicle registration and licensing is contained in the Road Traffic Decree which is fairly detailed. The Decree is drafted in such a way that it contains provisions which ought to be in the principal legislation as well as, the regulations. The relevant part of the Decree is Part 5, Vehicle Identification.

Licensing

Generally, the principal legislation in Rwanda, like its counter-part in Tanzania, does not seem to have specific provisions on vehicle licensing. However, Part 5 of the Decree has extensive provisions on vehicle registration (chapter 1); registration certificate (chapter 2); Registration number, distinctive sign and identification marks (chapter 3); renewal of plates and registration certificates (chapter 4); etc. All these provisions are discussed Chapter Three.

The detailed provisions which also seem to incorporate the regulations or rules, similarly, do not reflect on vehicle licensing. **None the less, motor licensing is mandatory in Rwanda and it is collected by the Rwanda Revenue Authority (RRA**) upon registration of the motor vehicle.

Chapter 7 deals with vehicles registered outside Rwanda. Article 132.1 says that where a vehicle is imported in transit, it is allowed to move under the cover of the registration plates and the distinctive signs of the country of origin, as far as it is covered by an international road certificate or a document representing it. The owner of must present this certificate on request by any qualified agent.

But if the vehicle owner has a registration certificate conforming to Article 35 of the Vienna Convention on road traffic, he must, after arrival in Rwanda, present this document to the competent authority and have the vehicle registration plates recorded. Similarly, if the owner of a motor vehicle does not have an international road certificate he must, at latest within 8 days upon arrival in Rwanda, have the registration plates recorded on payment of the prescribed royalty (fees) and obtain a copy of the registration deed which would be valid for 6 months. Article 132.2 further provides that permission to move in transit vehicles provided for in Article 132.1 shall be valid only for the duration of the validity of the certificates covering the vehicle. And, if the owner does not want to re-export such vehicle for any reason, he will be required to register it in Rwanda.

4.4 Tanzania

4.4.1 Tanzania Mainland

Principal Legislation

In Tanzania, vehicle licensing is supposed to be covered by Part II of the Road Traffic Act 1973. Surprisingly, this part deals with registration of motor vehicles and trailers only. Unlike in Kenya and Uganda, there are no specific provisions that are devoted to licensing of vehicles in Tanzania. Yet, regulations on display of road licences have been enacted from time to time and the licences are obtainable from TRA by motor **vehicle owners upon payment of the prescribed fee. Nevertheless,** the requirement of road licences seems to find its basis in section 114 (2) (a) which empowers the Minister responsible for finance to make regulations, prescribing or providing for

anything which may be prescribed or provide for in regulations. Thus, the review in this part will focus on the regulations.

It is also interesting to note that the Traffic Regulations, 2001 as amended by GN 177 of 2001 acknowledge in Part III of the Regulations that provisions on road licences were deleted in previous Traffic Regulations by Government Notice No. 104 of 1973, the same year, the Road Traffic Act, 1973 Cap 168 was enacted. Be it as it may the absence of provisions on motor vehicle licensing in the parent legislation, seems to be a glaring gap in the Tanzania legislation which should be filled in. TRA is responsible for motor vehicle licensing.

Regulations

Road Traffic (Motor Vehicles Registration) Regulations 2001 (GN No. 177/2001)

These Regulations which, basically, apply to motor vehicles registration and licensing of the same, apply to registration of all motor vehicles in Mainland Tanzania **except** motor vehicles owned by:

- the Government
- Tanzania Peoples Defence Forces
- International organisations
- diplomatic or consular offices.

The exemption in respect of these motor vehicles applies whether or not such motor vehicles are meant for use of public transport or private transport, (see Regulation 2).

Rule 26 goes on to say that the registration numbers and plates for Government owned vehicles and members of diplomatic or consular offices shall be conducted, administered, issued and managed by the Ministry of Works (Infrastructure) and Foreign Affairs and International Cooperation respectively. The Regulations are silent on whether these motor vehicles are exempted from licensing upon registration by the two respective ministries. This constitutes a gap and a weakness in the Regulations.

Further, the Regulations are silent on who registers motor vehicles owned by international organisations and whether these motor vehicles are entitled to licensing. This constitutes a second weakness in the Regulations.

Regulation 5 expands the list of motor vehicles which are exempted from registration under the Regulations. These include:

- any motor vehicle which is in transit to a country other than Tanzania;
- a vehicle carried or being moved from the harbour immediately after clearance by the Customs Office to the place where the owner resides.

Thus, under Regulation 5 motor vehicles in transit to any Partner States or being carried or moved from the Tanzania harbours after clearance to any Partner States where the owner resides are equally exempted from registration. Rule 5 like Rule 26 does not say whether these motor vehicles are also exempted from licensing, but the tenor of the provisions would seem to confirm this exemption.

Regulation 36 empowers the Commissioner for Customs and Excise to grant a permit in favour of any foreign motor vehicles pending the processing of application for registration of a newly imported motor vehicle. But this Regulation does not apply to motor vehicles in transit.

Provisions on licensing per se appear in Part IV of the Regulations. According to Regulation 16 where the Registrar registers a motor vehicle he will also issue to the applicant the following:

- a registration;
- a registration card;
- a motor vehicle licence.

Rule 21 emphasizes that a motor vehicle licence shall be issued where:

- the licence fee has been paid;
- the vehicle has been insured;
- the road worthiness certificate has been obtained.

The motor vehicle licence is valid for a period of twelve months at the end of which the owner of the vehicle is required to renew it subject to fulfilling the three conditions above.

The licence must be placed at a conspicuous place on the windscreen and, in the event of being destroyed, worn out or lost; the Registrar on application and upon payment of the prescribed fee must issue a duplicate licence. The licence fee may be refunded if the motor vehicle is de-registered but the period during which the motor vehicle was registered shall, for purposes of calculating the refundable fee be deducted. A motor vehicle dealer, like any other owner, is also required to obtain a motor vehicle licence in respect of motor vehicles kept by him (see Regulations 16(2) and 35(1)).

Road Traffic (SARPCCO) Vehicle Clearance Regulations 2000

The other, supposedly, applicable regulations in terms of licensing of motor vehicles in Tanzania is the Road Traffic (SARPCCO Vehicle Clearance Certificate) Regulations, 2000 GN No. 31 of 2000. SARPCCO means the Southern African Regional Police Chiefs Co-operation Organisation whose members comprise SADC country Partner States.

Under Regulation 3 any person seeking registration of a motor vehicle or trailer under the Road Traffic Act 1973 which is imported from SARPCCO member country must first apply for and obtain a SARPCCO Vehicle Clearance Certificate from the exporting country. The SARPCCO Certificate so obtained must be produced to the Interpol office in Dar es Salaam for verification before the motor vehicle or trailer is registered. The verification is done by a letter of confirmation or other means. And, Regulation 4 requires the Registrar subject to the provisions of section 11 of the Act (on registration) to satisfy himself that prior to registration of a motor vehicle, the applicant for registration, has in possession of SARPOCCO Vehicle Clearance Certificate together with a confirmation from the Interpol Office in Dar es Salaam.

The more interesting provision is Regulation 4(2) which provides that if the motor vehicle is imported from any other African country, the Registrar must satisfy himself that the applicant has a confirmation from the Interpol Office in Dar es Salaam indicating that the motor vehicle or trailer has neither been stolen from the country in which it was registered nor stolen from any other African country. Arguably, Regulation 4(2) creates another procedural requirement over and above those mentioned above in as far as registration and licensing of imported vehicles in Tanzania is

concerned. This requirement would seem to equally apply to motor vehicles imported from EAC Partner States.

The Road Traffic (Foreign Vehicles) (Exemption from Registration) Order 1999

This Order exempts foreign vehicles from registration. A foreign vehicle means a motor vehicle duly registered and licensed in any country other than Tanzania but not registered in Tanzania pursuant to the provisions of Part II of the Road Traffic Act, 1973. Order 3 exempts a foreign vehicle from registration under the provisions of Part II of the Act if there is a valid permit in respect of that vehicle. The permit is obtainable from Tanzania Revenue Authority (TRA) upon application and on payment of the prescribed fee. The fee payable may be in such foreign currency or other convertible currency approved by the Minister. Every permit shall be valid for a period of 90 days from the date when the motor vehicle first entered Mainland Tanzania, but the Permanent Secretary to the Treasury may extend the validity of any permit subject to such conditions as he may specify.

4.4.2 Zanzibar

Motor vehicle licensing features in Part IV of the Road Transport Act 2003. Section 35 of the Act prohibits any person to use a motor vehicle unless there is in a force road licence granted under the Act. The procedure for application for a road licence is provided for in section 36 of the Act. The applicant is required to furnish such particulars as may be prescribed, such as, that there is a valid insurance policy; the motor vehicle has been inspected and found to comply with the requirements of the Act as to construction, weight, equipment and use of applicable to the motor vehicle in question. Licences issued under this Act by the Zanzibar Revenue Board (ZRB) shall be valid for one year. ZRB seems to have taken over this function from the Authority under the Ministry of Transport which is still recognized under the Act. Be it as it may, ZRB may refuse to issue a licence on grounds specified in section 38 of the Act. Any person aggrieved by the decision of ZRB may appeal to the Minister. The licence should be displayed in the motor vehicle for which it is issued.

4.5 Uganda

Principal Legislation

In Uganda vehicle licensing is regulated by Part III of the Traffic and Road Safety Act, 1998 Cap 361 which also carries provisions on motor registration as reviewed in Part 4.1.3 above. Thus unlike in Kenya, provisions on vehicle registration and licensing are combined in one part.

Preliminary Considerations

Unlike in Kenya, Part II of the Act deals specifically with administration of the Act. Thus section 4 of the Act empowers the Minister to, by notice in the Gazette; designate a public officer as a Chief Licensing Officer of Motor Vehicles. Further, and unlike in Kenya, section 4(2) empowers the Minister to, by notice in the Gazette designate one or more public officers as Deputy Chief Licensing Officers of Motor Vehicles for such parts of Uganda as shall be specified in the notice. Any designation must be effected in consultation with the Minister responsible for internal affairs. This raises a presumption that the designation of such public, officers is not confined only to the Ministry responsible for the administration of this Act.

Section 5 of the Act allows the appointment of the following public officers:

- licensing offers;

- vehicle inspectors;
- examining officers;
- such other persons as may be necessary for carrying out the provisions of the Act.

Section 7 is very important for the purpose of this part of the review. It defines "licensing year" to mean a period of twelve months beginning with the day of first registration of the motor vehicle, trailer or engineering plant. And, under section 8(1)(b) the Chief Licensing Officer shall cause every licensing officer to keep registers of all motor vehicles, trailers and engineering plant registered by him and registration plates and licences issued by him.

A "motor vehicle" is defined in section 3 as any "self-propelled vehicle intended or adapted for use on the roads". A "trailer" "means any vehicle designed to be drawn or propelled by a motor vehicle but does not include (i) an integral sidecar, integral fore-car or integral trailer attached to a motorcycle; (ii) an engineering plant; (iii) agricultural implement not constructed or adapted for the conveyance of goods or burden of any description when drawn by a farmer's power-driven-vehicle. A "vehicle" on the other hand "includes a machine or implement of any kind drawn or propelled along roads whether by animal, mechanical, electrical or any other motive-power". And, "engineering plant" means movable plant or equipment being a self-propelled vehicle or trailer designed or constructed for special purposes of engineering operations, which, when proceeding on a road, does not carry any load other than such as is necessary for its propulsion or equipment. These definitions substantially depart from those found in the Kenya legislation. However, they do resemble the definitions in the Tanzania legislation.

Licensing for possessing motor vehicle – s.16

Under section 16 no person shall own or possess a motor vehicle, trailer or engineering plant or use it on a road unless it is licensed. An owner who does not intend to use the motor vehicle, trailer or engineering plant for a stated period must inform a licensing officer of the same provided he surrenders the registration plates (section 18(3)).

According to section 17 an application for a licence must be made to a licensing officer in the prescribed form and must be accompanied by:

- the prescribed fee;
- the registration book.

Moreover, the applicant must produce the motor vehicle, trailer or engineering plant for inspection.

Issue of Licence – s.18

A licence officer shall issue a licence in the prescribed form if he is satisfied that:

- the motor vehicle, trailer or engineering plant is duly registered;
- the particulars in the register relating to the motor vehicle, trailer or engineering plant are correct;
- the application is accompanied by a certificate in the prescribed form from a vehicle inspector that the motor vehicle, trailer or engineering plant conforms with the provisions of the Act; all other provisions of the Act have been complied with.

A licence may be issued for a period of four, eight or 12 months except that the prescribed fee shall be computed at the rate of one-twelfth for each complete month which remains within the licensing

year. Unlike in Kenya, the requirement that the motor vehicle should be insured does not express feature in this Act.

Failure to renew licence - s.21

If no licence is issued for a licensing year, the Chief Licensing Officer may, at any time after the expiration of that year, and before any licence is issued for any subsequent licensing year cancel the registration of the motor vehicle, trailer or engineering plant. The cancellation becomes effective until 30 days have elapsed after the expiration of the licensing year. After cancellation the registration plates must be surrendered to the Chief Licensing Officer. Similarly, if the owner fails to notify the Chief Licensing Officer that the motor vehicle, trailer or engineering plant will not be used on the road for a state period the Chief Licensing Officer may require a police officer to remove the registration plates and return them to the licensing officer. Expenses for removal and returning the registration plates shall be borne by the owner. New registration shall be required on payment of the prescribed fee (s.22).

Change of Classification for Licence - s.23

If a motor vehicle, trailer or engineering is altered or intended for other use the owner shall before the alteration or that other use surrender the current licence to a licensing officer for cancellation and a new licence should be applied for. The owner shall be entitled to a refund of the fee calculated at the rate of one twelfth of the annual fee for each complete month during which the licence would have remained valid.

Dealer's Vehicle Licence

A dealer in, or manufacturer of, or repairer of motor vehicles, trailers or engineering plants may apply to a licensing officer in the prescribed form accompanied by the prescribed fee for one or more sets of dealer's plates and a dealer's vehicle licence in respect of each set of dealer's plates. The provisions on the use of dealer's plates and the restriction thereof are similar to the provisions in the Kenya legislation. (see sections 27, 28 and 29).

Under section 30 a dealer in Uganda who repairs or deals in new, second hand or reconditioned motor vehicles, trailers or engineering plants or spare parts or replicas of them must have an approved place of business and must obtain a licence under the Trade Licensing Act, 1969 or the Industrial Licensing Act 1969 as the case may be. Such dealer must keep records of his transactions in the prescribed manner or prescribed form.

Offences and Penalties - s.34

This section 34 creates a number of offences and related penalties. The fines are calculated on the basis of a currency point system. And, a currency point is equivalent to two thousand shillings.

5. REVIEW OF OPERATORS' LICENSING LAWS

Road transport is the most important and dominant mode of transport in the Partner States and, as such, governments and the public should be concerned about the safety and the manner in which it is regulated. Service providers in the sector cannot be left to provide transport services in absolute terms as they deem fit without the intervention of regulators or governments in order to see to it that both the service providers and the consumers mutually benefit from their services.

Traditionally, road transport services in the three Partner States of Kenya, Tanzania and Uganda have always been regulated in order to prevent undue competition with other modes of transport, especially, the railway mode. Since the colonial times, laws were enacted in the said Partner States to establish institutions which were tasked with regulating provision of transport services among the three dominant modes, namely, road, railway and maritime especially in the big lakes of Victoria, Tanganyika, Nyasa and along the coast.

Operators' licensing is still a common and dominant feature in the provision of road transport services in the entire region of East African. Regulating service providers is done both for economic and social reasons, such as, ensuring provision of better but less costly services, improved safety, creating a fair level ground for effective competition and ensure compliance with traffic laws and regulations.

It is in recognition of this reality that the Partner States have come up with regional instruments which seek to regulate and coordinate services provision not only in the road sector but also in the other sectors as well. This review will focus mainly on three regional instruments of the EAC.

5.1 The EAC Treaty

The Treaty provides a meaningful starting point for regulating road transport operators' in the region. The Treaty in Article 127.1 and 128.1 acknowledges the role of the private sector, which is the main provider of road transport services in the region in the development of the Partner States' economies. Article 89 of the Treaty urges the Partner States to evolve co-ordinated, harmonised and complementary transport and communication policies. Supposedly, regulation of service providers should be one of them. In particular Article 90 obliges Partner States to, inter alia; harmonize their traffic laws, including laws on motor vehicle licensing. It follows, on the basis of this strength that the laws regulating road service providers in one Partner State should bear similarities with laws applicable in the other Partner States so that those regulated do not feel disadvantaged when they leave one jurisdiction to another in pursuit of their business. The bottom line of the Treaty is to see to it that provision of road transport services in the region is harmonised to tap the advantages of a common operative system instead of continuing to rely on a system that is disjointed based on national barriers or boundaries.

Consequent to this realisation and in consideration of the objectives of the EAC set out in Article 5 the Partner States have, in turn, signed the Tripartite Agreement on Road Transport, 2001 to replace a similar agreement signed in 1998.

5.2 The Tripartite Agreement on Road Transport, 2001

This Agreement, as the Preamble admits, was signed by the Partner States with the desire of strengthening their economic and commercial relations in the spirit of the Treaty and other relevant international and regional agreements with the object to promote, facilitate and regulate international road transport services between and in transit through their respective territories. There are few provisions in the Agreement which we need to explore.

The principles governing the Agreement are set out in Article III. One of the principles states thus; "There shall be fair and equal opportunity for the Partner States to share equally benefits realised from the administration of this Agreement in terms of investments and operations by carriers of the Partner States." As to market accessibility the Agreement in Article IV.1 allows a carrier wishing to undertake the carriage of goods or the conveyance of passengers by road between any point in the territory of one Partner State and any point in territory of the other Partner State or in transit across the territory of a Partner State to apply for a permit and or licence authorising such carriage or conveyance to the competent authority of the Partner in whose territory the vehicle to be used for such carriage is registered. Under Article IV.3 a carrier who has been authorized to conduct the carriage of goods under Article IV.1 shall not be required to obtain any additional authorization to undertake such carriage from the competent authority of the other Partner State. It is not clear why this sub Article dropped carriage of passengers and focused on carriage of goods only in disregard of Article IV.1. Be it as it may, the effect of Article IV.3 is to abolish the seeking of additional authorization through which the vehicle transits when carrying goods.

Another equally positive provision in the Agreement is Article IX.4 which says the registration and licensing of a vehicle in the territory of one Partner State shall be valid in the territory of the other. Of the same spirit is Article IX.7 which provides that Certificates of fitness issued in the territory of one Partner State shall be valid in the territory of the other Partner State.

The spirit of these provisions is to harmonise the provision of road transport services in the region without discrimination of the service providers. They are also meant to offer services which are cost effective to the operators and consumers.

However, the good spirit of this Agreement is eroded by the restriction in Article IV.4 which says in part, "that person granted a licence shall have: the right to transit through the territories of other Partner States without setting down or picking up goods or passengers. But he has the right to setting down and picking up goods or passengers between two points in the territory of the Partner States. This restriction may have been imposed with good intention but it has negative effect on a transporter who may be compelled to run an empty truck on a return trip much as there is cargo to pick in the transit Partner States. The restriction also waters down the spirit of competition between transit and domestic carriers contrary to the principle alluded to earlier. Worse still, the laws on registration of motor vehicles in the region still maintain non tarriff barriers, such as, the requirement for foreign vehicles to obtain permits before they enter a Partner State. The laws also do not compel Partner States to share information on such matters like vehicle registration, licensing, traffic offences and the like.

5.3 The Protocol on the Establishment of the East African Community Common Market

The Protocol is yet another development by the Community particularly in areas of services provision. Article 3 of the Protocol enumerates the principles of the Common Market as follows:

- Partner States should observe the principle of non-discrimination of nationals of other Partner States on grounds of nationality; and
- Accord treatment to nationals of other Partner States not less favourable than the treatment accorded to third parties.

Pursuant to these principles, the Protocol Commits the Partner States to:-

- Remove restrictions on the right of establishment and residence of nationals of other Partner States in their territory in accordance with the provisions of the Protocol;
- Remove measures that restrict movement of services and service suppliers, harmonise standards to ensure acceptability of services traded.

More importantly, Article 13(5) calls upon the Partner States to ensure that all restrictions on the right of establishment based on the nationality of companies, firms and self employed persons of Partner States are removed, and shall not introduce any new restrictions on the right of establishment in their territories. Equally more important is the Protocol's call on Partner States to remove any agreements previously concluded between the Partner States which form an obstacle to the right of establishment. The Tripartite Agreement and especially Article IV.4 which subscribes for transit services only is one area that calls for serious revision to accommodate the aspirations of the Protocol.

It is incumbent upon the Partner States and the EAC now to take deliberate measures to identify their laws and agreements which hinder the effective application of the Protocol and the drive towards harmonisation of rules and regulations on road transport service providers in the region. Kenya's decision to restrict the presence of commercial carriers from other Partner States in its territory should seriously be reconsidered in order to benefit from the effects of market liberalization in road transport services.

The review in the next part examines the laws applicable in each of the Partner States with respect to operator licensing.

5.4 Burundi

Operator licences in Burundi are issued under the Act on Domestic Road Transport of 2009. However, licences issued under this Act apply to road transport within Burundi only. They do not apply to international road transport which is regulated by relevant multilateral and bilateral agreements (Article 2). The licences apply to both carriage of passengers and goods (Article 3).

Part II Chapter 1 of the Act enumerates the rights to transport and the general principles applicable to domestic road transport (and operators, for that matter). Article II says that domestic road transport system must meet the needs of users both economically and socially. The system should strive to contribute to the economic and social development of the country and to the expansion of inter-regional trade.

The conditions for grant of an operator licence are provided for in Articles 25, and Chapter V of Part III of the Act. Under Article 25 companies or individuals providing domestic road transport services must be registered in a register kept by the office designated by the Minister. Registration of the operator in this register is subject to three conditions, namely, professional integrity, financial standing and professional competence. The Minister is empowered to make regulations on how these criteria will be effectuated.

In Chapter V of the Act, Article 73 begins by stating that access to domestic road carrier profession requires a licence granted by the Minister. And Article 74 amplifies the preceding Article by saying that except for international and occasional transport services and to those services to which the provisions of the Act and regulations do not apply, no natural person or legal entity shall operate a domestic road transport of passengers or goods without being registered by the Department of Domestic Transport of the Ministry in charge of transport or provincial registrar. Article 75 recapitulates the entry qualifications for engaging in the business of professional carrier of passengers or goods. They are the same qualifications mentioned in Article 25. But those qualifications do also apply to drivers. The specifications of the motor vehicles to be used in the carriage must be produced. Drivers and attendants to such motor vehicles must obtain special certificates issued by the Minister.

The certificate of business issued by the Minister must contain, among other particulars, the register number and the requirements (conditions) for registration. In case of transfer of the business by the operator the certificate must be returned or cancelled and the transferee must apply for a new licence.

The operator licence may be cancelled and the holder of the licence deleted from the register if he no longer meets any one of the qualifications or requirements for registration or if he ceases to provide the services. The removal becomes effective after serving a one month's notice to the operator. The operator's licence may also be withdrawn if the operator violates the law or any regulations on transport, labour and security.

Since this Act applies to domestic transport only and, by the same token, to domestic road operators only, it follows that international operators whether Burundians or otherwise are not covered by this law. The applicable law or rules, supposedly, are the bilateral or multilateral agreements or the EAC Tripartite Agreement for operators hailing within the Community.

5.5 Kenya

Business licensing in Kenya is primarily governed by the Transport Licensing Act, Cap 404 and the Transport Licensing Regulations L.N. 98/1976 as amended from time to time. However, provisions on operator licensing especially of public service vehicles also feature in Part XI of the Traffic Act, Cap 403 and the Traffic Rules L.N.84/1993 as amended. The Transport Licensing Act, Cap 404 (TLA) establishes the Transport Licensing Board within the Ministry responsible for transport to oversee the licensing of both public service and goods vehicles in Kenya. The functions of the Transport Licensing Board (TLB) are generally provided for in section 4 of the Act.

Under section 4 of this Act no person can use a motor vehicle on a road for the carriage of goods for hire or reward; or in connection with any trade or business; or for hire or reward convey any person by means of any motor vehicle unless he is licensed in accordance with the provisions of the Act. The following classes of licences may be issued under the Act:-

(a) for goods vehicles:-
  (i) a public carrier's licence (A licence)
  (ii) a limited carrier's licence (B licence)
  (iii) a private carrier's licence (C licence)

(b) for passenger and public service vehicles, a road service licence. A road service licence issued in respect of a public service vehicle may authorize the holder to carry for hire or reward both goods and passengers.

Part III of the Act prescribes the conditions which may be attached to the licences issued by TLB. Under section 8 it shall be a condition of every goods vehicle or road service licence that any authorized vehicles are maintained in a fit and serviceable condition; that the provisions of any law relating to limits of speed and weight, loading of good vehicles and the number of passengers to be carried are complied with and that the provision of the Act and the regulations relating to keeping of records shall be complied with. TLB may also attach special conditions to a licence issued under the Act as it deems fit. The bottom line for imposing all these conditions is to ensure that operators provide transport services which are safe and of the requisite quality.

On the other hand, the Traffic Rules made under the Traffic Act Cap 403 provide the technical specifications for public service vehicles. The specifications or standards include the weight and dimensions of the vehicles, body construction, fitting of speed governors, doors and steps, ventilation, arrangement of seats etc. It is pertinent to note that in Kenya 14 seater min-buses are no longer licensed to operate as public service vehicles. In Tanzania, no passenger vehicle of less

than 25 passengers' capacity shall be licensed or allowed to operate into the central business district of Dar es Salaam.

There are also provisions regulating the conduct of drivers, conductors and passengers and the withdrawal of a licence if the operator contravenes any of the conditions upon which the licence was issued.

It is rightly submitted by Nathan Associates Inc. in their study Corridor Diagnostic Study of the Northern and Central Corridors of East Africa, April 15, 2011 that since 1995 the Ministry of Transport's functions relating to the registration and licensing of vehicles have been transferred to the Kenya Revenue Authority (KRA). Further, with the introduction of a fuel levy in 2006, the licensing of goods vehicles previously undertaken by the Transport Licensing Board (TLB) was abolished. Uganda has also converted the operator business licensing fee into a fuel levy.

Kenya also questioned the rationale of weighing public service vehicles in Tanzania, which is not the practice in Kenya. In response, it was observed that public service vehicles do commonly carry goods as well and, therefore, there was a likelihood of overloading.

Meanwhile in Kenya, like in Tanzania, the East African Customs Management Regulations 2010 made under the East African Customs Management Act 2004 have an impact on operators who carry transit goods. They are required to obtain a permit from the Commissioner of Customs subject to such conditions as he may deem fit. One of the conditions is that such operators should exclusively carry transit goods only or goods under customs control. In effect the operators are barred from carrying goods destined for domestic destinations. This denies them accessibility to the local market as a result they are forced to run empty trucks during return journeys from their original destinations. The operators are also exposed to another restriction in terms of accessibility to the local market. This restriction arises from the Tripartite Agreement on Road Transport which requires such operators to travel only on the appointed transit routes.

In Kenya operators of goods motor vehicles except those from COMESA are also required to obtain a permit on payment of the prescribed fee under Rule 7A of the Traffic Rules. Apparently, this is also the practice for foreign vehicles crossing Tanzania. It was the concern of Burundi carriers that Tanzania charges an exorbitant fee for foreign trucks in transit to and from the port of Dar es Salaam and Tanga.

In exercising its discretionary power on whether or not to grant a licence to an applicant for operator's licence, Regulation 15(3) says that the licensing authority, in this case, KRA, shall have regard to whether the applicant is a citizen of Kenya or, if the applicant is a company, to whether the members and employees of that company are citizens of Kenya. With this provision in place it is doubtful if the right of establishment and non-discrimination advocated by the Protocol on Common Market will find easy application in the Republic of Kenya.

5.6 Rwanda

Rwanda, like Tanzania, regulates operators' licences through a regulatory agency known as the Rwanda Utilities Regulatory Agency (RURA) which was established in 2001 vide Law 39 of 2001. RURA has a department which is specifically charged with motor vehicle operators' licensing while registration, as mentioned, is done by the Rwanda Revenue Authority. RURA works under the Ministry responsible for air, water and road transport matters. More importantly, Rwanda runs a public transport company which basically, provides passenger transport services all over the country including areas which are not easily accessible by private operators. Moreover, the company provides intercity passenger transport services between Kigali and Kampala. Rwanda provides

passenger transport services on routes in rural areas which are not profitable for private operators to operate. The Government has found it difficult to subsidize the operators because the informal public transport system is not well organized. However, once the infrastructure in the rural areas is improved the Government will pull out to pave way for private operators.

Before an applicant for an operator licence is licensed, RURA requires that the applicant should have adequate means to finance his operations. RURA also seeks to protect users from anti-competitive practices and ensures that operators comply with the legal requirements governing their operations. In other words, pre and post entry conditions for road transport services are regulated by this Agency.

Pursuant to Law 39 of 2001, Rwanda has enacted regulations which also apply to foreign truck operators who want to operate in Rwanda. Under the regulations, it is now mandatory to obtain a transit licence, subject to conditions imposed by the regulations, such as, technical specifications of the motor vehicles, proof of roadworthiness of the vehicles and insurance. These regulations are disputed by Nathan Associates Inc. (2011) in the sense that they conflict with the intended liberalization of market access for cross – border transport as envisaged in the Tripartite Agreement on Road Transport and the COMESA Single Carrier Licence regime. Comparatively, the regulations seem to follow the path subscribed by the motor vehicle transport regulations in Kenya which confine the local market in Kenya to Kenyan national operators only. However, a participant in the Experts' Meeting observed that in spite of these developments, Rwanda was interested in liberalising provision of transport services in the Partner States including on routes other than the transit routes ear-marked in the Tripartite Agreement. This observation needs serious consideration by the Partner States in view of the restrictive legislation found in the Partner States, such as, Kenya and Tanzania – Zanzibar which restrict domestic provision of road transport services to nationals only.

The passage of these regulations will definitely have a remarkable impact on the trucking industry in Rwanda and the region generally because, in comparison to the number of foreign transporters, mainly from Uganda, Kenya and Tanzania, the proportion of Rwandan transporters is relatively low. It is admitted by the Rwanda Ministry of Infrastructure that the shares of import, export and re-export of goods transported by Rwandan vehicles in 2006 were 40%, 38% and 22% respectively, indicating dominance of foreign registered vehicles in regional transportation of goods.

Business motor operators in Rwanda, and possibly, Burundi have to contend with another delicate issue, that of acquiring motor vehicles which are right hand driven (RHD) or left hand driven (LHD). It is admitted by MINIFRA (2009) that Rwanda has historically driven on the right-hand side of the road, but Rwanda is now a member of the East African Community whose other members are Kenya, Uganda, Tanzania and Burundi. Kenya, Uganda and Tanzania all drive on the left-hand side of the road and these three countries constitute 85% of the population of the Community. Thus, drivers from these three Partner States must exercise extra-caution when they enter the other two Partner States of Rwanda and Burundi. Of course, the story is equally the same for drivers from the latter Partner States when they have to drive in Kenya, Tanzania and Uganda. Any harmonized legislation for motor vehicle registration and licensing in the Community should also take into account this challenging task. It is of interest to observe that the debate on whether to driver on the left or right came up in all the experts' workshops conducted by the Consultant in the Partner States.

Presently, the Presidential Order No. 40/01 of 16/10/2005 Modifying and Complementing Presidential Decree No. 85/01 of 02 September 2002 Regulating General Traffic Police and Road Traffic categorically state in Article 1, that "all motor vehicles registered in Rwanda must have a

steering apparatus on the left hand side. However, motor vehicles in transit and or those belonging to foreigners visiting Rwanda for different purposes with steering apparatus on the right hand side, are allowed to use them for a period not exceeding three months. But when the period of three months expires, an authorisation from the Minister who has transport in his/her attributions is required." This Presidential Circularly gave a grace period to those with RHD vehicle to convert them to LHD by 16th October 2009. MINIFRA is now in the process to commission another study which will explore further this delicate issue before a final decision is made on whether to switch to RHD.

Suffice it note that public services vehicle operators in Rwanda have also to comply with Article 131 of Chapter 6, Part 5 which provides in Article 131.3 that "Every vehicle imported for paid transport of people must bear in an apparent way, both on the driver's door and on door permitting entrance to the vehicle of passengers, mention of the maximum number of passengers who can be transported and this number should not exceed the one indicated by the manufacturer." Like the Kenya law, safety and quality service is therefore given priority in provision of public transport services.

5.7 Tanzania

5.7.1 Tanzania Mainland

In Tanzania two statutes are responsible for regulating passenger and goods transport. The first, is the Transport Licensing Act, 1973 Cap 317 (TLA) and the second is the Surface and Marine Transport Regulatory Authority Act, 2001 as amended which also establishes a regulatory authority for surface and marine transport. The agency is known as Surface and Marine Transport Regulatory Authority (SUMATRA).

Prior to its amendment in 2001 TLA used to establish three regulatory authorities, the Central Licensing Authority (CTLA), the Regional Licensing Authorities (RLAs) and Urban Local Government Authorities. The latter regulated all commuter buses plying within the jurisdiction of an urban local authority. It should be noted that when this Act was enacted in 1973 basically it sought to regulate intercity and inter-regional transport of passengers. Urban transport seems to have been left out until 1999.

Following the passage of the Surface and Marine Transport Regulatory Authority Act, 2001 the Transport Licensing Act, 1973 was amended so that powers and functions which the Minister responsible for communications and the licensing authorities (that is, CTLA, RLAs and Urban Local Government Authorities) used to enjoy under the 1973 Act were transferred and vested in the Surface and Marine Transport Regulatory Authority (SUMATRA). So, today the task of granting road service licences even for commuter buses in urban areas and the imposition of discretionary conditions on the said licences lies with SUMATRA. In fact, as far as urban areas are concerned, SUMATRA can issue what is known as exclusive licence under section 26 of the Act. This provision says that a licensing authority (SUMATRA) may, subject to such conditions as it may impose, grant to any person an exclusive licence authorizing such person to operate vehicles for the carriage of passengers in any urban area or part thereof over such routes or between such places therein as it may decide. SUMATRA has never exercised this power.

Generally, it is the requirement of this law that every operator of a public service vehicle must obtain a road service licence from SUMATRA before he engages in the business of carriage of passengers. And every licence issued under the Act is subject to mandatory conditions which are intended to secure safety and comfortability of the passengers carried. For that reason, section 31(1) of the Act provides that it shall be a condition of every licence:-

- That all authorized vehicles (i.e. vehicles covered by that licence) shall be maintained in a fit and serviceable condition;
- That the provisions of any law for the time being in force relating to limits of speed and weight, the number of passengers to be carried are complied with in relation to the authorized vehicles;
- That the provisions of any law with respect to the time for which drivers may remain continuously on duty and the time for resting are observed.

SUMATRA is further empowered to attach to a road service licence such other conditions as it may think fit. One such condition is that "vehicles shall be operated in accordance with time tables approved by SUMATRA and that copies of the time tables and fare tables shall be carried and be available for inspection in every vehicle used on the service.

Section 31(3) says that a licensing authority (SUMATRA) may attach to a road service licence such conditions as it may think fit and, in particular, for securing that the fares shall not be unreasonable; and where desirable in the public interest, the fares shall be so fixed as to prevent wasteful competition with alternative forms of transport. The implication of all these provisions is that SUMATRA, as a licensing authority, enjoys the mandate to set and determine the fares based on the tests of unreasonable and wasteful competition.

Presently SUMATRA has enacted the following regulations to secure good quality services:

- The Transport (Road Passenger) Licensing Regulations 2007. According to SUMATRA these regulations are intended to provide a new and improved procedure of applying and granting of road service licenses and set new conditions of licensing of passenger vehicles including conditions to operate in urban areas. The Regulations also impose obligations to licence holders to provide passenger services which are safe, reliable and affordable transport services to all categories of passengers.
- The Passenger Vehicles (Technical Safety and Quality of Service Standards) Rules, 2007. The Rules are meant to set standards for technical safety and quality in road passenger transport. Therefore, they introduce appropriate and acceptable passenger vehicle design, safety and comfort to users including disadvantaged groups such as elders, people with disability and children.

According Nathan Associates (2011) Tanzania, like Kenya, has abolished licences for goods vehicles and that since 2008, SUMATRA requires all truck operators register their vehicle details annually on the basis of which an operator decal or sticker is issued which must be affixed to the vehicle. The registration process acts as a form of safety regulation in that an operator is required to provide a copy of the vehicle inspection report and proof of third party insurance. Through these measures it is hoped that high quality standards, like those applicable in passengers' carriage will also apply in freight operations. Nathan Associates submit further that since 2004/2005 licensing of foreign commercial vehicles has been abandoned although, as evidenced by the deliberations in the Experts' Meeting in Dar es Salaam, such vehicles must obtain a permit from the finance Minister after payment of a prescribed fee to the Tanzania Revenue Authority (TRA).

Meanwhile, TRA like KRA also licences vehicles carrying transit goods and on top of that TRA, according to Nathan Associates, have also recently permitted transit operators returning from international trips to pick up backhauls from locations within Tanzania provided they remain on the designated transit route. This finding was further confirmed by an official from SUMATRA in the deliberations during the Experts' Meeting held in Dar es Salaam on 15 July 2011. This relaxation is probably intended to partially domesticate the provisions of the Tripartite Agreement in the trucking industry in Tanzania.

A participant from the National Institute of Transport objected to the liberalisation of domestic routes to international transporters because local operators are complaining that the market is now over-

flooded. But the SUMATRA official responded that SUMATRA was in the process to commission a study to determine the demand and supply of transport services on the major road corridors and other promising domestic routes.

5.7.2 Zanzibar

Commercial licensing of motor vehicles in Zanzibar is regulated by Part V of the Road Transport Act, No. 7 of 2003, as well as, the Commercial Motor Vehicles Regulations, 2004 L.N. 46 of 2005. The Act designates the Director responsible for road transport in the Ministry responsible for road transport to be the Principal Road Transport Authority in Zanzibar assisted by the Officer in Charge of road transport in Pemba as his assistant. The functions of this Authority include, inter alia; to register and keep registers of all motor vehicles and trailers registered under the Act; to administer the licensing of commercial vehicles in accordance with the Act and to collect fees, charges and other amounts payable to the Authority under this Act. Consequent to the establishment of the Zanzibar Revenue Board it was observed in the Experts' Meeting held in Zanzibar that, presently, the Authority exercises these functions on behalf of the Board. Any fees and charges collected by the Authority should be accounted for to the Zanzibar Revenue Board which actually performs the function of registering motor vehicles in Zanzibar.

The Act establishes the Road Transport Board chaired by a person appointed by the President while the Director of Transport is among the members of the Board. The Board plays the role of an advisory organ to the Minister in the sense that it advises the Minister on any of the following matters:

- Provision of public transport services;
- Improvements in the movement of road traffic;
- Improvements in the movement of passengers and freight transport ;
- Requirements of roads and vehicles etc.

Under Part V of the Act, commercial vehicles are categorized into public service vehicles or goods vehicles. Public service vehicles are divided into seven classes while goods vehicles are divided into two classes. The grant of licences to commercial vehicles is dependent on compliance with statutory conditions namely, that the authorized vehicle is maintained in a fit and serviceable condition as prescribed under the Act and that any provisions contained in the Act with respect to rules of the road weight laden and unlade, and the loading of vehicle is complied with. Licences granted under the Act shall remain in force for a period not exceeding three years.

Part II of the Regulations above-mentioned deals with the licensing of commercial vehicles. Of interest is Regulation 3 which provides that:

> "*3. Any person shall be eligible to apply for a licence to operate a commercial motor vehicle if such person:*
> *(a) Is a Tanzanian residing in Zanzibar or, if a company is, owned by a Tanzanian and registered in Zanzibar under relevant law.*
>
> *Provided that any person who has been authorized by a Tanzanian living outside Zanzibar, may apply for a licence on behalf of that person and any such application shall be deemed to have been made by that person.*
>
> (b) *is eighteen years of age or above and is of sound mind*."

Additional conditions for grant of licences under these Regulations are basically more or less the same with those discussed in other statutes or regulations of the Partner States.

Regulation 3, like the regulations in Kenya, clearly defies the spirit of the Tripartite Agreement and the Common Market Protocol. The Regulations in Zanzibar are even more prohibitive, in that they bar Tanzanians hailing from the Mainland to provide commercial motor services in the Isles. Supposedly, it is for this reason that the right of establishment espoused by the Common Market Protocol was highly disputed by the Experts' Meeting in Zanzibar. The bottom-line was that is it too premature to talk of free movement of services and service providers in countries like Zanzibar, since, such a move was likely to disadvantage and disrupt peace and tranquillity especially among the youths and young entrepreneurs who may find themselves thrown out of employment and business respectively. Tourism industry was cited as a case study which has thrown many Zanzibar residents into unemployment.

Apart from this restrictive regulation the other regulations particularly those on pre and post entry into the carriage industry seek to create an enabling environment for provision of quantitative as opposed to quantitative transport services.

5.8 Uganda

Freight and passenger transport in Uganda is regulated by the Traffic and Road Safety Act 1998 and the regulations made under the Act. The Act establishes a licensing authority in the name of the Transport Licensing Board (TLB) consisting of eight members. The primary function of the Board is to regulate the use of public service vehicles, private omnibuses and goods vehicles throughout Uganda. The licences issued by the Board are divided into eleven classes, including, public omnibus operator's licence and goods operator's licence. A public omnibus is defined to mean a public service vehicle that carries passengers at separate fares on a previously determined route. By virtue of section 72 of the Act the Minister shall cause the road passenger transport industry to be organised on route basis in such a way that licensed operators keep within their catchment areas and on the routes for which they are licensed.

In compiling the routes and package for routes due regard and consideration shall be given to the needs of the public; the desirability of providing services which are both efficient and economic; and the transport policy agreed upon between Uganda and any other States. The last consideration seems to compel Uganda to honour any bilateral agreement which it might have signed with another country on provision of road transport passenger services. This is a radical departure from the other Partner States' transport laws which tend to focus on protection of domestic transport markets and local operators in particular.

Like in other Partner States, grant of a licence, especially, a public omnibus licence, TLB is enjoined to take into consideration a number of conditions or factors including the reliability, character and financial stability of the applicant; the condition of his motor vehicles and the facilities at his disposal for the general maintenance of service on the route or routes or combination of routes. Besides, TLB shall not offer, grant or renew a public omnibus licence to any person who has been convicted of an offence involving fraud or dishonesty within two years before the date of his application; or is in breach of a condition of any previously held operator's licence or has had a public service operator's licence of a type held by him cancelled under the Act or any other enactment.

Meanwhile, in considering the grant of a private and contract omnibus operator's licence the Board shall have due regard to, among other things, the needs of the public, the desirability of providing services which are both efficient and economic and the agreed transport policy of neighbouring countries. Once again, the last consideration seems to take into account the desire to harmonise the provision of transport services in Uganda with neighbouring countries or Partner States. It may thus forcefully be argued that the legislation in Uganda is relatively progressive in comparison with

legislation in other Partner States because it seeks to promote what Nathan Associates Inc. (2011) calls qualitative regulation of road transport services which focus on carrier qualifications, financial standing, management capacity and, above all, domestication of regional agreements in national laws, such as, the Tripartite Agreement on Road Transport. Licences granted by the Board in respect of passengers' carriage may remain in force for five years unless they are revoked or cancelled for good cause.

Application for goods operator's licence is regulated by section 84 of the Act and the applicant is required to comply with any matters which may be prescribed in addition to supplying of forms or documents which may be prescribed. The conditions for grant of a goods operator's licence are similar to those applicable in respect of omnibus operator's licence, but the duration of this licence is only for one year, but renewable upon the applicant's compliance with the statutory conditions.

During the Experts' Meeting in Uganda as well as in Burundi, there were allegations that foreign transporters in Kenya are discriminated and, sometimes, forced to stay at check points or weighbridges for unnecessarily long time contrary to the red-carpet treatment given to their counter-parts, that is, Kenyan carriers. These allegations, if true, should be a matter of great concern in view of the objectives and principles of the Protocol on Common Market which discourages discrimination, and at the same time, calls for the right of establishment by non-nationals in other Partner States of the Community.

5.9 Emerging Issues on Fees/Charges

In reviewing the laws on motor vehicle registration and licensing in the Partner states, two issues on fees emerged.

5.9.1 Fees/Charges Collected Under Road Traffic Laws

In registering and licensing motor vehicles all Partner States collect a variety of fees or charges from the applicants. The fees or charges are not harmonized in the region and in a way, they interfere with the smooth flow and provision of transport services in the region. The fees or charges collected by the Partner States include permit/foreign vehicle entrance fee; number plate fee, initial registration (card) fee; vehicle annual registration/licensing fee; transit toll; driver licence/permit fee and operators' licensing fee. The permit fee is normally collected when a motor vehicle from one Partner State enters the territory of another Partner State. The same applies to road/transit toll which is collected from commercial motor vehicles which transit another Partner States. While collection of transit toll may be justified on the ground that it is charged against commercial vehicles running over the infrastructure of another Partner State, the collection of permit/entrance fee seems to have no justification apart from being a non tariff barrier particularly to land locked countries like Burundi. It is for this reason that Partner States are invited to abolish it. The other fees/charges may be retained because they are payable domestically by residents within the Partner State. Table 2 presents the fees/charges collected in the region.

Table 2: Fees/Charges Collected Under Road Traffic Laws

S/NO.	Type for fee/charge	Burundi	Kenya	Rwanda	Tanzania (Mainland)	Zanzibar	Uganda
1.	Foreign vehicle entrance/permit fee	✓	✓	✓	✓	✓	✓
2.	Transit/Road Toll	x	✓	✓	✓	x	✓
3.	Registration card/initial registration fee	✓	✓	✓	included in taxes	✓	✓
4.	Number plate fee	✓	✓	✓	✓	✓	✓

5.	Driver licensing/permit fee	✓	✓	✓	✓	✓	✓
6.	Operator licensing fee	✓	Fuel levy	✓	✓ (on PSVs)	✓	Fuel levy
7.	Annual registration/licensing fee	✓	Fuel levy	Fuel levy	✓		Fuel levy

5.9.2 **Modality for Collecting Annual Registration/Licensing Fee**

The annual motor vehicle registration fee or motor licensing fee is not uniformly collected across the region. In Burundi, Tanzania, Rwanda and Zanzibar the fee is collected on annually based on the engine capacity of the motor vehicle. In Kenya and Uganda the fee is collected as part of fuel levy. Rwanda also intends to collect it as fuel levy. In Kenya, even the operators' licence fee for commercial vehicles is collected in form of fuel levy.

The decision by Kenya and Uganda to collect licensing fees in form of fuel levy was strongly debated in the Experts' and the Task Force meetings. It is not in dispute that licensing fees for motor vehicles constitute a source of revenue for budgets of the Partner States. Therefore, the modality in which this revenue is collected will definitely have an economic impact on a Partner State's economy. If fixed licensing rates based on engine capacity are likely to generate more revenue than rates imbued in fuel levy the respective Partner State will obviously go for the fixed rates. The same is true for the vice versa. In this respect, if licensing fees in the Partner States is wholly economically driven, then it is advised that Partner States should conduct a study to determine the most lucrative modality between the two and agree on one common modality on how licensing fees shall be collected in the Partner States.

This approach was also questioned in experts' meetings held in the other Partner States on two grounds. First, it was doubted if KRA still takes into consideration road safety issues when collecting this levy. It was argued, particularly in Zanzibar, that traditionally, the function of operator licensing is to regulate and monitor road safety operations by the regulator something which KRA is unlikely to be doing. This concern is also shared by Nathan Associates Inc. who contends that KRA undertakes licensing largely as a revenue protection activity. There is no evidence that consideration is given to the impacts of the licensing regime on transport efficiency.

Secondly it was argued that transporters from Partner States which still collect operators licences' fees in form of prescribed fees pay twice for the same cost when they purchase fuel in Kenya and Uganda. This, therefore, constitutes one of the issues for harmonisation within the region. As contended above, Partner States should agree on one common modality after conducting a study to determine which modality is more profitable to Partner State in terms of revenue collection.

6. AREAS FOR HARMONISATION AND IMPROVEMENT

Table 1 summarizes the areas of convergences and divergences in so far as motor vehicle registration in the Partner States is concerned. It is to be concluded from the Table that there are more areas of commonality than differences as pointed out below:

Table 3 Comparative Provisions on Motor Vehicle Registration Within EAC

S/N	Area/Item	B	K	R	T	U
1.	Appointment of Registrar (authorities) of motor vehicles	Art 6	S.3(1)	Art.121.2	S.3(1)	S.4(1)
2.	Appointment of Deputy Registrar(s) of motor vehicles	Art 9	-	-	S.3(2)	S.4(2)
3.	Appointment of other officers (vehicle inspectors, examination officers, licensing officers, certifying officers etc.	-	S.3(2) S.3(3)	Art.3.1 3.4 3.5	S.4	S.5
4.	Duty to keep prescribed Registers for motor vehicles/particulars of Registers	Art 68	S.5	Art.121.2	S.5 R.10	S.8 S.35(d)
5.	Registers open for inspection by police officers, Government officials	Art 69	S.5(2)	-	S.5(2)	S.8(2)
6.	Registers open for inspection by members of the public	Art 69	S.5(3)	-	S.6	S.35(6)
7.	Furnishing certified copies	-	S.6(6)	Art.129.4	S.7	S.10
8.	Double registration of motor vehicles	-	R7(5)	-	R.6A R.3A	-
9.	Compulsory registration of motor vehicles	Art 65	S.6	Art.122	S.8	S.11
10.	Classification of registered motor vehicles	Art 66	S.4	Art.121	S.9(1) R.4(3)	S.12
11.	Application for registration	Art 65	S.6(2)	Art.121.1	S.10 R.4 R.7	S.13
12.	Registration of motor vehicles in the name of proprietor	Art 66	-	-	-	S.13(4)

13.	Conditions/requirements for registration	Art 65/135	S.6(3)-(4) S.10	Art.123	S.11 R6(2)-(5) R9	S.13(3)-(4) S.14(1)-(2)
14.	Assignment/issue of identification marks (numbers, plates, certificates, books etc)	Art 66	S6(5) R6(1)	Art 124	S11(2) R16(2)	S14(4)
15.	Sign of nationality of motor vehicle	Art 67	R6(2)	Art 126	R17	-
16.	Registration by 2 or more owners	-	-	-	S11(3)	S14(5)
17.	General registration of dealers	Art 137	S.12	Art 133	S.12(1)	S.25 S.26
18.	Restriction on use of dealers' plates	-	12	-	R. 12 R.21	27(1)
19.	Carrying of original or duplicate copy of certificate/book of registration	Art 65	S.13	Art 129	S.13	S.35(d)
20.	Fixing of/obscured/defaced identification marks	-	S.6(6)	Art.125	S.14 R.22 R.23	S.35(a)
21.	Prescribed specification of identification marks/e.g. how to fix them, colours, size of numbers, materials used, reflective materials etc)	Art 65	R.7	Art 126 127 130	R.22 R.23	S.35(a)
22.	Presumption of ownership of motor vehicle	-	S.8	-	S.15	S.31
23.	Change/notice of change of ownership of motor vehicle and procedure for change	Art 68	S.9	Art124.2	S.16(1) R.29	S.32(1)
24.	Change in conditions of registered motor vehicle/change of particulars of motor vehicle	Art 66	S.6(7) S.6(8)	Art 124	R.29 R.31	S.19
25.	Exemption from registration of motor vehicles under the applicable law	Art 87	S.11 R.9(1)	Art122.2	S.17 R.8 R 5	S.33

26.	Registration of/ permit for foreign/diplomatic corps motor vehicles.	Art 62	R7A(1)	Art 124 123A 132	R.18	-
27.	How to register and how to allot or assign registration number to motor vehicles plus the numbering system for private, public or diplomatic carps motor vehicles	Art 67	R.6	Art 126	R.18	35(c)
28.	Cancellation/Deregistration/ suspension of registration and consequences thereof	Art 68	-	Art 129	S.39(8) R.32 R.34	S.20(2) S.21(2) S.22 S.35(b)
29.	Refund of registration fee on suspension	Art 68	-	-	S39(9)	-
30.	Registration of motor vehicle if registration is cancelled or vehicle licence is not renewed	Art 68	-	Art 129	S39(10	21(1)
31.	Registration Government motor vehicles	Art 67	-	Art123.3	R.26	S.33
32.	Particulars of registration card/book and validity period	Art 68	S.6(2) R.5	Art124.3	R 19	S.35
33.	Offences and penalties related to registration and identification marks	Art 143	S.14	Art130.5	S.19	S.14

6.1 Convergences in motor Registration

For historical reasons the areas of convergence among the three founder Partner States of the Community are many and, indeed, some of the provisions look like a replica of each other. The core areas of convergence within all the Partner States include the following:

(i) **Appointment/Designation of Registrar of motor vehicles**

In all the Partner States the law provide for the appointment of Registrar of motor vehicles with or without deputies by either the finance or transport Ministers. These are assisted by other officers such as, licensing officers, vehicles inspectors/examiners, certifying officers etc. In Uganda the registrar bears the title of the Chief Licensing Officer of Motor Vehicles. Revenue authorities have now assumed the role of registering and licensing motor vehicles in all the Partner States.

The Registrars and their deputies are obligated to keep prescribed registers of the registered motor vehicles and, where the registration is done by a licensing officer the latter is obliged to transmit the information to the Registrar. In Tanzania the Regulations go further to define the particulars to be

contained in a Register. In Uganda the same is done via the Regulations enacted under the parent legislation. Except for Rwanda, provision is made in the law that these registers are open for inspection by police officers or government officials. Members of the public may also access the registers for good cause on payment of the prescribed fee. However, sharing of data by Partner States is not mandatory.

(ii) **Compulsory registration of motor vehicles**

The laws in all Partner States prohibit ownership, possession or use of a motor vehicle unless it is registered under the applicable law. The registration is done by making an application in the prescribed form and on payment of the prescribed fee. The vehicles are registered according to a class to which they belong. In Kenya, Uganda and Rwanda the classification of the motor vehicles is provided in the principal legislation while in Tanzania and Burundi that is left to Regulations enacted by the Minister responsible for finance or transport respectively. Registration is done in the name of the owner and there is a presumption of ownership to that effect.

(iii) **Conditions for registration**

In all Partner States the traffic laws lay down conditions or requirements for registration. Common, among others, are:-

- the motor vehicle is in a fit and proper condition or otherwise it may first be sent for inspection;
- the motor vehicle has been lawfully exported from its country of origin or the country in which it was last registered.
- the motor vehicle has been lawfully imported into the relevant country;
- tax or duty due has been paid.

(iv) **Assignment /Issue of registration marks**

Upon registration of the motor vehicle the Registrars are bound to issue a registration book, card or certificate, as the case may be to the applicant or owners. Besides, they are bound to assign identification marks in respect of each registered motor vehicle. The marks include registration numbers and plates and both the principal or subsidiary legislation in each Partner States provide detailed and elaborate provisions on how the marks shall be affixed on the motor vehicle, the size of the marks, the materials used in making the marks, the size of the letters and numbers appearing on the identification marks and the colour.

Either the original or duplicate copy of a registration book, card or certificate is supposed to be carried in the respective vehicle failure of which constitutes a criminal offence. It is also an offence for a motor vehicle to carry a defaced, obscure or mutilated identification mark.

The identification marks also reflect the nationality of the motor vehicle.

(v) **Change of ownership/change of motor vehicle particulars**

All the legislation in the Partner States provide for change of ownership of a motor vehicle particularly the procedure to be adhered to before the change is effectively recognized in law. Similarly, the statutes make provision on re-registration of a motor vehicle if there are substantial changes in the particulars or class of a previously registered motor vehicle. In all cases the

changes require the making of an application in the prescribed form and on payment of the requisite fee.

(vi) **Registration of Government Consular or International Organization Vehicles**

In every piece of legislation of Partner States provision is made for registration of government vehicles, vehicles belonging to embassies/consulates and other international organizations. However, there are marked differences on how the registration will be done from one Partner State to another.

(vii) **Exemption from registration**

Generally all the statutes in all the Partner States exempt registration of a certain classes of motor vehicles under the applicable road traffic legislation. Commonly exempted vehicles include those owned by the government (including local governments); the armed forces, ambulances and consular vehicles. These may be registered under another law or authority other than that is generally charged with the registration of motor vehicles in the respective State.

(viii) **Creation of offences and penalties**

All statutes in Partner States create offences related to failure to register a motor vehicle, the carrying and affixing in the appropriate position of identification marks, the failure to carry the original or duplicate copy of registration books, cards, certificates, the carrying and affixing defaced or obscure identification marks on motor vehicles etc.

(ix) **Revenue Authorities acting as Registrars**

In all States revenue authorities act as the registrars of motor vehicles but the laws have not been amended to reflect this reality. There are advantages and disadvantages in mentioning the specific institutions acting as registrars in the traffic legislation. The advantage is that the general public becomes aware of the institution that is responsible for the task instead of simply mentioning the title of Registrar. The disadvantage is that the law (traffic legislation) need to be amended if the government designates another public office other than the existing institution as registrar of motor vehicles. Since in all Partner States revenue authorities are currently charged with this task it may be advantageous if the traffic legislation is amended to this effect if at all Partner States opt for arrangement.

6.2 Divergences in motor vehicle registration

In spite of the similarity of the legislation in the Partner States as highlighted in the previous part, still there are many areas of divergence which are worth consideration for purposes of harmonization in the region. Common areas of difference include the following:

(i) **Registration authorities**

In Uganda and Tanzania there may be such number of Deputy Registrars as the appointing authorities may deem necessary. Kenya legislation does not subscribe to this provision. In view of the computerized systems of vehicle registration, it is doubtful whether the presence of Deputy Registrars in other parts of the country in Tanzania and Uganda still makes sense.

In Tanzania, there is now a Bill pending before the National Assembly which seeks to establish an agency that will take over this responsibility from the Tanzania Revenue Authority (TRA). Should this Bill become a law this will create another marked difference within the Partner States. It was

doubted by Uganda whether creation of such a new institution was not simply a proliferation of institutions which add no value in practice.

(ii) **Other (subordinate officers)**

There is disparity among the Partner States on the type, number and mode of appointment of subordinate staff to the Registrars motor vehicles. In Tanzania there are vehicle inspectors and examining officers who are also appointed by the Minister for internal affairs. In Kenya the Registrar appoints such licensing officers as may be necessary while the Minister appoints a certifying officer for examination of vehicles. This officer may also exercise the powers of an inspector. Lastly, the Minister also appoints such inspectors and driving test examiners as may be necessary. On its part, the Uganda legislation advocates for the appointment of licensing officers, vehicle inspectors and examining officers without specifying the authority responsible for appointing them. Nevertheless, the parent legislation empowers the Minister to make regulations to this effect. Now that revenues perform this function the disparity may not make sense in practice.

Rwanda legislation enlists about nine subordinate staff or qualified agents for general administration and enforcement of its legislation. But for purpose of motor vehicle registration three agents are mentioned in the legislation, namely, national police officers and non-commissioned officers on duty; customs department agents and income tax department agents. Clarity on whether these agents are also the employees of the two departments is missing. In Burundi the task lies with the Minister in charge of transport.

(iii) **Classification of registered motor vehicles**

Except for Tanzania and Burundi classification of motor vehicles for purposes of registration in other Partner States is done in the parent legislation. In Tanzania and Burundi this function is delegated to the Minister responsible for finance by making regulations to this effect. This classification varies from one Partner States to another. Kenya has 10 classes, Uganda 13, Rwanda 5 and Tanzania 4. The criteria for classification invariably depends on, among other, the following factors:

- size or capacity of the motor vehicle measured in terms of the engine capacity;
- heavy commercial vehicles;
- engineering plants;
- trailers and semi trailers;
- pedestrian controlled vehicles etc.

Motor vehicle registration is a source of revenue in each Partner State and, therefore, the classification is primarily determined by this objective.

(iv) **Restriction on motor vehicle ownership based an age**

The Tanzania law prohibits any person under the age of 18 years to be registered as owner of a motor vehicle or trailer, but a person who has attained the apparent age of 14 years may be registered as the owner of a motor cycle. Persons adjudged to be of unsound mind are equally barred from being registered as owners of motor vehicles but their trustees can be so registered. This latter restriction is presumably applicable to all Partner States.

In Uganda any person whatever his or her age may be registered as the owner of a motor vehicle provided they meet the provisions of the law. The age restriction does not feature in the Kenya or Rwanda legislation either.

(v) Conditions for Registration

Apart from the general common conditions for registration discussed in the previous part, there are additional specific requirements imposed by Partner States' legislation for effectuating motor vehicle registration. The Kenya legislation imposes the following addition requirements or conditions:

- if the application for registration is in respect of a commercial vehicle or trailer and the load capacity is not declared by the manufacturer of the classis, the licensing officer cannot register the motor vehicle or trailer until an inspector has determined its load capacity. There is no similar provision in the Tanzania legislation;
- if the licensing officer has reason to believe that a motor vehicle or trailer is constructed according to different specifications he may refuse to register the motor vehicle or trailer until it is approved by the Registrar;
- there must be clearance by the country from which it is exported.

Uganda enlists the following additional conditions:

- the application for registration should be accompanied by or combined with an application for a licence and insurance;
- the application should state the name and address of any person other than the owner in whom the property of the motor vehicle is vested.

Tanzania imposes the following additional conditions:

- the application for registration must contain data identifying the vehicle and the owner and customs clearance certificate;
- if the vehicle is imported by a person other than an importer the application must contain information relating to the identity of the owner, particulars of the vehicle and relevant taxes and duties by the exporting country have been paid;
- if the vehicle is imported from a SARPCCO member country the applicant should produce a SARPCCO Vehicle Clearance Certificate.
- If the motor vehicle is imported from any African country there must be confirmation by Interpol Office in Dar es Salaam that the motor vehicle was not been stolen from the country in which it was registered.

Burundi also requires clearance of Interpol before a motor vehicle is registered.

The conditions imposed by Rwanda depend on whether the vehicle is new or a second hand vehicle.

- for new vehicles the application must be accompanied by a certificate of the manufacturer or the distributor attesting that the vehicle has been supplied in a new state and should contain the vehicle particulars;
- for second hand vehicles already registered in Rwanda the previous certificate of registration must be attached;
- for second hand vehicles registered outside Rwanda the first requirement above applies.

(vi) Title of Documents for Registration

Once a motor vehicle is registered, the Registrar in Tanzania issues a registration card, in Kenya and Uganda, they issue a registration book, while in Rwanda and Burundi a registration certificate is issued.

(vii) **Number of owners of registered motor vehicles**

In Tanzania if a motor vehicle is owned by two or more persons, the registration shall be made in the name of all the owners. But under no circumstances can registration be effected under a business name or under the name of any unincorporated body. Yet, registration can be effected in the name of a society if the society is registered under the Societies Act, Cap 337.

In Uganda if the motor vehicle is owned by more than one person, the registration shall be effected in the name of one of the owners nominated by all of the owners, and if the owners are members of an unincorporated body, by the governing body of that unincorporated body. Like in Tanzania, no registration can be made under a business name or under the name of any unincorporated body.

There are no similar provisions in the Kenya, Rwanda and Burundi legislation.

(viii) **Change of ownership of motor vehicle**

In Tanzania any sale or disposition of any kind whatsoever must be notified to the Registrar in the prescribed form by the owner within 7 days of the sale or disposition, showing the name and address of the new owner, the mileage recorded and the delivery of the registration card to the Registrar. The Regulations also impose an obligation on the new owner to notify the Registrar of the change. Upon notification the Registrar shall issue a new registration card and the old card shall be surrendered for cancellation. It is apparent from this exposition that while the notification of change takes place the new owner continues to use the motor vehicle without any restriction.

In Kenya no motor vehicle shall be used on a road for more than 14 days after the date of transfer unless the new owner is registered as the owner thereof. The process of notification is similar to that applicable in Tanzania except that in Kenya it is the new owner who inserts his particulars in the registration book and not the Registrar.

In Uganda the law is similar to the Tanzania law except that in addition to the registration book, the owner in Uganda must also surrender the plates.

Rwanda has a more simplified procedure. The change of ownership shall be notified to the Tax Department either orally or by a registered letter and the certificate of registration must be given back to the Department by hand or registered letter. There is no time span within which this process should be completed. Burundi seems to have this provision in regulations made by the Minister.

(ix) **Suspension of registration**

The law in Tanzania empowers the Registrar to suspend the registration of a motor vehicle for a period not exceeding 12 months and in that event the owner must surrender the certificate of registration and no refund of the fee shall be made.

Suspension of registration of motor vehicles is not covered by statutes applicable in the other Partners States, except that in Uganda the registration may be cancelled if there is failure to renew a motor vehicle licence.

6.3 Convergences in motor vehicle licensing

In as far as vehicle licensing is concerned; all the statutes (laws) from the EAC Partner State seem to converge on the following areas. This convergence is highlighted either in parent legislation or the Rules/Regulations made under the parent legislation.

(i) **Establishment of Licensing Authorities**

All Partner States create an authority for licensing motor vehicles. This authority is in the form of a public authority, that is, authority responsible for revenue (tax) collection. Rwanda establishes the Rwanda Revenue Authority (RRA). For Tanzania, it is Tanzania Revenue Authority (TRA), for Kenya it is the Kenya Revenue Authority (KRA), for Uganda it is the Uganda Revenue Authority (URA),for Burundi it is the Burundi Revenue Authority (BRA) and for Zanzibar it is the Zanzibar Revenue Authority (ZRA).

(ii) **Appointment of the Licensing Authorities**

The appointment of the licensing authorities who are invariably known as Registrar, Deputy Registrar(s) and Chief Licensing Officer is done by either the Minister responsible for finance or transport.

(iii) **Ownership and use of motor vehicles**

All statutes, rules and regulations in the Partner States prohibit the owning, possession or use of a motor vehicle or trailer on the road without licensing of the respective motor vehicle or trailer. The licensing is done after the owner or applicant has filled in the prescribed application form and paid the prescribed fee and more importantly, on meeting the conditions for vehicle licensing which are specified either in the statute, the rules or the regulations.

(iv) **Dealers' General Licences**

There are detailed provisions almost in each Partner State on the grant of dealers' general licences to those who operate the business of repairing, manufacture or deal in new motor vehicles, trailers or engineering plants. Nevertheless, minor differences are notable with states like Uganda.

(v) **Surrender of Vehicles Licences**

The provisions in the statutes, rules or regulations invariably impose an obligation on owners of motor vehicles to surrender the vehicle licence to the licensing authorities when the motor vehicle is temporarily or permanently out of use or when it is exported to another country. In such cases, refund of the licence fee to the owner is normally done on pro rata basis.

(vi) **Application for new vehicle licences**

The statutes, rules or regulations require motor vehicle owners to apply for new vehicle licences where they desire to change the use of the motor vehicle for purposes other than for which it was licensed or if they alter the structure of the vehicle and puts it in a class other than for which it was licensed.

(vii) **Classification of motor vehicles for purposes of licensing**

In all the Partner States motor vehicles are classified into different categories or classes for purposes of charging the licensing fees. The classification is done either in the parent legislation or the rules or regulations made there under. However, the classification is not uniform for all the Partner States.

(viii) **Exemption from licensing**

Another common feature of the laws applicable in the Partner States is the presence of provisions either in the parent legislation or the rules or regulations which exempt certain categories of motor vehicles from licensing. These are normally vehicles owned by the Government, the armed forces, the diplomatic missions and international organizations. But few differences are notable as discussed below.

(ix) **Display of Vehicle licences**

It is a common requirement in all the laws reviewed that a vehicle licence shall be displayed on a motor vehicle in such a conspicuous manner that will facilitate law enforcing agents to see to it that the motor vehicle is duly licensed. Generally, the licence is supposed to be placed on the window screen of the licensed vehicle.

(x) **Penalties**

All the laws in the Partner States contain penal provisions on non-compliance with the provisions motor vehicle licences. The penalties include fines or imprisonment or both but the modality of calculating the fines differ particularly with Uganda.

(xi) **Making of rules/regulations**

Except for Rwanda statutes in other Partner States empower the responsible Ministers to make rules or regulations on a myriad of matters relating to vehicle licences, such as:-

- the application forms for motor vehicles licences;
- licences for motor vehicles;
- the way licences may be affixed on motor vehicles;
- the fees or charges payable for various classes of motor vehicles;
- the alteration or cancellation of licences;
- dealers' general licences;
- duplicate copies of licences etc.

6.4 Divergences in motor vehicle licensing

(i) **Parent legislation on motor vehicle licensing**

Unlike Kenya and Uganda, the parent legislation in Tanzania, Rwanda and Burundi do not have express provisions on motor vehicle licensing. In Tanzania the provisions feature in the Regulations made by the Minister under the parent legislation while the Rwanda legislation is silent on the same. It seems that in Rwanda and Burundi vehicle licensing is provided under regulations made by Ministers.

(ii) **Exemption from Licensing**

Much as all the parent legislation in various Partner States subscribe to provision on motor vehicles exemption from licensing, this exemption does not come out clearly in some Partner States. For example, in Tanzania, it is not clear whether all vehicles exempted from registration are automatically exempted from road licensing, including foreign vehicles.

Kenya exempts vehicles belonging to other countries if there is a reciprocal agreement on motor vehicle licensing with such other country. It also exempts ambulances and motor vehicles used on private roads to which the public has no access. In Tanzania motor vehicles intended for use by the members of fire fighting groups, ambulance or those intended for delivery of emergency services are exempted from the requirement of licence

Further, Kenya advocates for grant of an authorization permit to foreign vehicles brought in Kenya provided there is an application in the prescribed form accompanied by the foreign vehicle registration book. The authorization permit is issued depending on whether the vehicle is private, commercial, public and whether or not it has a valid international certificate. For private vehicles the permit may be issued free of charge for a period between 7 days and 3 months.

In Tanzania foreign vehicles are exempted from registration by the Road Traffic (Foreign Vehicles) (Exemption from Registration) Order 1999, but as argued earlier it is not clear if this exemption also

exempts them from licensing. But under this Order foreign vehicles can obtain a permit on payment of the prescribed fee whether in foreign or any convertible currency in lieu of registration.

In Uganda, use of motor vehicles licensed outside Uganda and whether or not such vehicles are exempted from licensing are matters to be prescribed in Regulations made by the Minister. In Rwanda and Burundi it is not clear whether all vehicles exempted from registration are automatically exempted from vehicle licensing but otherwise all registered vehicles must be licensed.

(v) **Grant of Dealers General Licences**

Divergences also feature in the provisions relating to grant of dealers' general licences. The Kenya parent legislation restricts the use of a dealer's licence to the district in which the business is carried and any person holding a general dealer's licence if aggrieved by the decision of the Registrar may appeal to the court. There are no such similar provisions in the Uganda, Tanzania, Rwanda and Burundi legislation.

(vi) **Failure to Renew a Vehicle Licence**

In Uganda, if no licence is issued for any registered motor vehicle for any licensing year the Chief Licensing Officer may cancel the registration of the motor vehicle. In Kenya, if the licence is not obtained a sum equal to the fee payable shall be due to and owing to the Controller of Inland Revenue as a civil debt recoverable summarily at the instance of the Controller. The civil remedies in both Uganda and Kenya are in addition to criminal sanctions that may be imposed on the offender. For the case of Tanzania failure to renew a vehicle licence attracts a penalty over and above the fee payable.

(vii) **Uniform Presentation of the law on motor vehicle licensing**

There is no uniformity among the Partner States on presentation of the law relating to motor vehicle licensing. A provision, in one Partner State could be found in the parent legislation whereas, in the other, the same provision may be found in rules or regulations made under the parent legislation.

6.5 Convergences in Operators' Licensing

The review showed that there are both areas of convergence and divergence in the laws regulating operators' licensing in the Partner States. In summary, these are the areas of convergence in the statutes reviewed above.

(a) **Grant of Licences**

In all the Partner States operators' licences are granted by public offices which are either revenue authorities or transport regulatory agencies or government departments. Where licences are granted by revenue authorities it is doubtful whether the traditional requirements of safety and roadworthiness of the motor vehicle still play a predominant role as opposed to revenue considerations. Similarly, it is questionable whether revenue authorities also consider efficiency in the provision of the services before licences are issued.

(b) Conditions for grant of licences

In all the Partner States, the statutes set conditions for applicants interested in providing transporting services especially public passenger transport services. Apart from roadworthiness of the vehicles the statutes also pay due regard to reliability, good repute or character and financial stability of the service providers. The conditions further require the operators to provide services which are both efficient and economic. It is quite clear, therefore, that if all these conditions are fully

implemented the services rendered to the public will be of the requisite qualitative standard, safe and reliable.

(c) **Lack of domestication of regional agreements**

Presently, the EAC has three key, regional instruments in place which propagate for the provision and integration of road transport services at regional level. These are the EAC Treaty, the Tripartite Agreement and the Common Market Protocol. Interestingly, the statutes on road transport in force in the Partner States at present hardly make provision for domestication of these important agreements. The national markets for national carriers are statutorily over protected, resulting into the erosion of the fundamental principles such as, those on the right of establishment and non-discrimination. As Nathan Associates Inc. (2011) correctly puts it, not only are the benefits of liberalization and abolition of NTBs not secured, but there is evidence that individual States are implementing protectionist measures, which undermine the spirit of the regional agreements.

(d) **Monitoring and enforcement of operators**

Generally, monitoring of the service providers in all the Partner States is done by the regulatory authorities assisted by the police. There is low level of enforcement of the conditions imposed on the operators which is attributed to a number of reasons including lack of adequate financial, technical and human resources.

6.6 Divergences in Operators' Licensing

(a) **Absence of independent regulatory transport agencies**

Not all Partner States have established road regulatory agencies in their countries. This function continues to be performed by Government departments which are basically charged with the function of policy formulation and monitoring.

(b) **Government provision of transport services**

In Rwanda the government still provides public passenger transport services on routes which are not profitable to private operators.

6.7 Recommendations

Recommendation 1:

In view of the convergences and divergences observed by this review it is recommended that Partner States should draft a common legal instrument which would, among other things*:-*

- *domesticate the provisions of the regional agreements especially the Tripartite Agreement on Road Transport;*
- *develop a uniform system of registering and licensing of motor vehicles based on common parameters;*
- *develop a uniform system of licensing transport operators based on common parameters.*
- *Create a forum for road transport regulators to share their experiences and implementation of the legal instrument which is proposed here.*

***Recommendation 2**:*

Based on the review of the various laws applicable in the Partner States coupled with the experts' views gathered in meetings held in all the Partner States and buttressed by the Task Force views, a legal instrument on motor vehicle registration, licensing and operators' licensing is, accordingly, recommended. The instrument should canvass among others, the following:

- *registration and licensing of motor vehicles be done by each Partner State based on common agreed criteria or parameters;*
- *use of ICT in motor vehicle registration and licensing;*
- *the creation of data base and sharing of data on motor vehicle registration and licensing among the Partner States;*
- *the grant and use of friendly ICT identification marks on registered and licensed motor vehicles;*
- *in addition to other requirements, only environmentally sound motor vehicles should be registered and licensed in the region;*
- *prohibit charging of permit fees for motor vehicles of one Partner State entering in another Partner State so as to accommodate the spirit of the EAC Protocol on Common Market;*
- *incorporate the provisions of the Road Tripartite Agreement of 2001;*
- *the proposed law should be a bare framework while further details shall be prescribed in Regulations made by the Council of Ministers or a Minister in charge of transport in a respective Partner State.*
- *The form of instrument recommended for this purpose is an Act of the Community as previously recommended by similar studies carried out by the EAC, such as, the Study on the Legal Framework for Introducing One Stop Border Post, 2010.*

It was observed by the Task Force that before the proposed legal instrument is finally drafted and enacted as a law, EAC should organise multi-disciplinary meetings to discuss the approved draft by experts and professionals from the following offices in the Partner States;

- Ministries of finance
- Ministries of works and transport
- Ministries of justice/Attorney Generals
- Revenue authorities
- Insurance Agencies/companies
- Police (Traffic)
- Agencies/Bureau of Standards
- Environmental agencies
- Road safety agencies
- Road transport regulatory agencies
- Private sector (operators) and
- Road services consumer associations.

6.8 Form of Instrument

The form of instrument recommended for this purpose is an Act of the Community as previously recommended by recent studies and this study in thematic area No. 5. Two documents, namely:

- Draft proposed East African Community Motor Vehicle Registration and Licensing Act 201_
- Draft East African Community Motor Vehicle Registration and Licensing of Motor Vehicles Act: Reference Law, Objectives and Reasons are appended to this Annex as Appendix 1 and 2 respectively.

REFERENCES

General References

1. EAC: The Treaty for the Establishment of the East African Community, 1999
2. EAC: The Tripartite Agreement on Road Transport, 2001
3. EAC: The Tripartite Agreement on Inland Waterway Transport
4. EAC: Protocol on the Establishment of the East African Community Common Market 2009
5. EAC: One Stop Border Posts Policy Paper for the East African Community May 2010
6. COMESA Protocol on the Third Party Insurance Scheme
7. COMESA Protocol on Common Carrier Licence
8. Infra Africa (Pty) Ltd Weighbridge Infrastructure and Operations, Final Report May 2008
9. Nathan Associates Inc. Corridor Diagnostic Study of the Northern and Central Corridors of East Africa April, 2011
10. PADECO. Co. Ltd Study for the Harmonization of Vehicle Overload Control in the East Africa Community, Final Report, July, 2011
11. Techno Serve, Analysis of Enforcement of Laws and Regulations that Govern Road Transport Industry in East Africa, February, 2001
12. SADC, Enabling Legal Reform: Control of Vehicle Loading, May 1999
13. Rwanda, Ministry of Infrastructure, Final Report on the Study on the Possibility of Switching Driving Side in Rwanda, Kigali, August 2009
14. Infra Africa (Pty) Ltd, Road Traffic Amendment Act and Regulations, (Final) May 2008
15. EAC, East African Transport Strategy and Regional Road Sector Development Program, Workshop 3 Concept Note
16. EAC, East African Trade and Transport Facilitation Project, Basic Information, EATTFP Progress Brief
17. COMESA, The Development of the Regional Third Party Motor Vehicle Insurance (Yellow Card) Scheme
18. Tanzania Revenue Authority: Time Release Study Report, April – August 2005, September 2005, Dar es Salaam.

STATUTES

Kenya

The Traffic Act Cap 403

The Transport Licensing act Cap 404

Traffic Rules Regulations

Tanzania

Road Traffic Act 1973 Cap 168

Transport Licensing Act 1973 Cap 431

Road Traffic (Motor Vehicles Registration) Regulations 2001 GN 177/2001

Road Traffic (SARPCCO Vehicle Clearance Certificate) Regulations, 2000 GN 31/2000

Road Traffic (Display of Road Licences) Regulations 1993 GN 264/1993

Traffic Regulations 2001

Road Traffic (Foreign Vehicle Exemption From Registration) Order 1999

Uganda

Traffic and Road Safety Act 1998

Rwanda

Presidential Decree Regulating General Traffic Police and Road Traffic No. 85/01 of 02/09/2002

Presidential Order No. 40/01 Modifying and Complimenting Presidential Decree No. 85/01

Burundi

Act No. 1/04 of 17th February 2009 on Domestic Road Transport

Zanzibar

Road Traffic Act, 2003

APPENDIX 1

THE EAST AFRICAN COMMUNITY MOTOR VEHICLE

REGISTRATION AND LICENSING ACT, 201_

ARRANGEMENT OF SECTIONS

PART I

PRELIMINARY PROVISIONS

Regulation *Title*

PART II

ADMINISTRATIVE PROVISIONS

PART III

REGISTRATION OF MOTOR VEHICLES AND TRAILERS

PART IV

CONSTRUCTION AND USE OF MOTOR VEHICLE, TRAILER AND EQUIPMENT

26. Prohibition of sale of vehicles, etc not complying with regulations as to construction
27. Use of vehicles in dangerous condition
28. Failure to comply with requirements for carriage of goods and persons, weights, etc of commercial vehicles
29. Liability for breach of roadworthiness requirement
30. Interpretation in respect of this Part

PART V

TESTS OF VEHICLES AND ISSUE OF ROADWORTHINESS CERTIFICATES

31. Power to fix the age of motor vehicles
32. Examination of motor vehicle, trailer, etc in connection with registration, etc
33. Tests of condition of motor vehicle
34. Examination orders for examination of vehicles
35. Persons to conduct examination of vehicles, trailers, etc
36. Examination of motor vehicle, trailer, etc on road by police officer or motor vehicle examiner and removal to motor vehicle examination centre or police station
37. Examination of commercial motor vehicles
38. Power to prohibit driving of unfit motor vehicles
39. Prohibition conditional on examination
40. Power to prohibit driving of cargo vehicle
41. Power of motor vehicle examiner on examination of motor vehicle
42. Motor vehicle not in accordance with particulars in register, form of application for registration or notice of transfer
43. Motor vehicle not roadworthy or not in accordance with this Act or condition of motor vehicle licence
44. Removal of prohibition
45. Fitting and supply of defective or unsuitable motor vehicle parts

PART VI

LICENSING OF MOTOR VEHICLES AND TRAILERS

46. Motor vehicles and trailers to be licensed
47. Application for licence
48. Conditions for issue of licence
49. Vehicle inspection certificates
50. Form of licence
51. Licence to be carried on vehicle
52. Duplicate licences
53. Recovery of licence fee by civil process
54. Penalties under this Part

PART VII

LICENSING OF PUBLIC SERVICE AND GOODS VEHICLES

PART VIII

LICENSING OF DRIVERS OF COMMERCIAL VEHICLES

PART IX

ENFORCEMENT AND INSTITUTION OF PROCEEDINGS

(a) Enforcement

(b) Institution of proceedings

PART X

MISCELLANEOUS PROVISIONS

THE EAST AFRICAN COMMUNITY

MOTOR VEHICLE REGISTRATION AND LICENSING ACT

_____

No …..OF 201_

_____

DATE OF COMMENCEMENT----------

_____

An Act of the Community for the registration and licensing of motor vehicles

Enacted by the east African Community and assented to by the heads of State

PART I

PRELIMINARY PROVISIONS

Short title, application and commencement

1. (1) This Act may be cited as the East African Community Act on Motor Vehicle Registration and Licensing.
(2) This Act shall apply to the Partner States.
(3) This Act shall come into force on the date as the Council may, by notice in the Community *Gazette*, appoint

Interpretation

2. In this Act, unless the context otherwise requires-

"articulated vehicle" means a combination of vehicles comprising a tractor and semi-trailer so attached to the tractor that part of the semi-trailer is superimposed upon the tractor and when the semi-trailer is uniformly loaded, not less than 20 percent of the weight of its load is borne by the tractor;

"axle" in relation to a vehicle means an imaginary line that extends from one side of the vehicle to the other side and around points in which wheels of the vehicle revolve;

"carriage of goods" includes haulage of goods;

"certificate of roadworthiness" means a certificate issued to a vehicle that complies with the relevant provisions of the motor vehicle inspection regulations made under this Act that is otherwise in a fit condition to be operated on a public road;

"certifying officer" means the person appointed to be the certifying officer under Part II of this Act;

"class" includes description;

"commercial vehicle" means a motor vehicle constructed or adapted for the carriage of goods or burdens of any description in connection with any trade, business or agriculture, but does not include any type or class of motor vehicle

which the **Registrar** may, by notice in the **Community Gazette**, declare not to be commercial vehicles for the purposes of this Act;

"Council" means the Council of Ministers of the East African Community established by Article 9 of the Treaty;

"currency points" means the value of a currency point specified in the **First Schedule**;

"dealer" means any person who deals by way of business in motor vehicles or trailers;

"dealer's general licence" means a licence issued under **section 20;**

"drive", in relation to a motor vehicle, includes the steering of a motor vehicle;

"driver"-

(a) in relation to a motor vehicle, means any person who drives or attempts to drive or guides, or is in actual physical control of, any vehicle on any road;

(b) in relation to a towed vehicle, means a person who drives the towing vehicle;

"engineering plant" means movable plant or equipment being a self-propelled vehicle or trailer designed or constructed for special purposes of engineering operations which, where proceeding on a road, does not carry any load other than such as is necessary for its propulsion or equipment;

"fare" means the amount paid or payable for a passenger's conveyance in a public service vehicle or for the hire of a whole passenger-carrying public service vehicle, and includes any sum paid or payable for the conveyance of luggage in excess of any free allowance and any other sums lawfully charges or chargeable by the owner of a public service vehicle or by that person's representative in connection with the conveyance of a passenger in such vehicle;

"*Gazette*" means the Official Gazette of the Community.

"goods vehicle" means a motor vehicle constructed or adapted for use for the carriage of goods, or a trailer so constructed or adapted, whether used or constructed or adapted solely fort hat purpose or not, including an articulated vehicle adapted for the conveyance of goods. For the purposes of this description, a vehicle that is constructed for both the carriage of goods and passengers shall be considered primarily for the carriage of goods if the number of seating positions multiplied by 68 kilogrammes is less than 50% of the difference between the gross vehicle mass and the unladen mass;

"heavy goods vehicle" means a motor vehicle that is constructed primarily for the carriage of goods and-

(a) either-

(i) has at least four wheels; or

(ii) has three wheels; and

(b) has a gross vehicle mass exceeding 12,000 kilogrammes;

"heavy omnibus" means a passenger vehicle that has more than twelve seating positions and a gross vehicle mass exceeding 5,000 kilogrammes;

"Inspector-General of Police" means the officer for the time being performing the duties of Inspector-General of Police and includes any other officer duly authorized to act on his behalf;

"licensing officer" means a licensing officer appointed under Part II;

'manufacturer" means a manufacturer of motor vehicles and trailers;

"Minister" means the Minister to whom functions under this Act are assigned.

"motor car" means a motor vehicle having seating accommodation for not more than ten passengers excluding the driver, but does not include a motor cycle;

"motor cycle" means a motor vehicle with less than four wheels the weight of which unladen does not exceed **four hundred kilogrammes**;

"motor omnibus" means a public service vehicle having seating accommodation for more than twenty-five passengers exclusive of the driver;

"motor vehicle" means any mechanically propelled vehicle, excluding any vehicle running on a specially prepared way such as a railway or tramway or any vehicle deriving its power from overhead electric power cables or such other vehicles as may from time to time by rules made under this Act be declared not to be motor vehicles for the purpose of this Act;

"owner"-

(a) in the case of a vehicle which is for the time being registered under this Act and is not being used under a hiring agreement or hire-purchase agreement or a finance lease agreement, means the person appearing as the owner of the vehicle in the register kept by the authorities appointed under section 3 of this Act or chief licensing officer under this Act; and

(b) in relation to a vehicle which is the subject of a hire-purchase agreement or hiring agreement or a finance lease agreement, means the person in possession of the vehicle under that agreement;

(c) in relation to a vehicle not registered under this Act, includes the driver or the person in charge of the same;

"owner's transport vehicle" means a goods vehicle of an employer of labour in respect of which a licence is granted under **section 72** to carry the employees or agents of that employer;

"Partner States" means the member countries of the Republic of Burundi, the Republic of Kenya, the Republic of Rwanda, the United Republic of Tanzania, the Republic of Uganda and any other country granted membership in the East African Community under Article 3 of the Treaty;

"passenger"-

(a) in relation to a person carried on a public service vehicle, does not include the driver or conductor or any ticket inspector on the vehicle in pursuance of his duties;

(b) in relation to persons carried on a goods vehicle, does not include the driver or any attendant required by law to be carried on such vehicle; and

(c) in relation to a private car, does not include the driver;

"passenger transport service" means the carriage of passengers, whether for hire or reward or otherwise, in an omnibus; or the carriage of passengers for hire or reward in a metered or unmetered taxicab, or the conveyance of persons in an organized tour or safari, or any other service that may be described;

"passenger vehicle" means a vehicle that is constructed or adapted solely for the carriage of passengers and their effects;

"plying for hire" in relation to a vehicle, includes-

(a) standing on any public taxi rank or stand;

(b) being offered for hire by any notice, advertisement or announcement;

(c) standing or travelling whilst exhibiting a "For Hire" notice of any kind;

"prescribed" means prescribed by rules or regulations under this Act or other appropriate law in force in the respective Partner State;

"private hire vehicle" means any public service vehicle constructed or adapted to carry not more than seven passengers, exclusive of the driver, such vehicle not being a taxicab or *matatu* or *daladala*;

"public omnibus" means a public service vehicle that carries passengers for hire or reward;

"public service vehicle" means any motor vehicle which-

(a) is licensed **under Part VII** to carry passengers for hire or reward; or

(b) plies for hire or reward or is let out for hire or reward; or

(c) is carrying passengers for hire or reward;

"register" includes information stored in a computer and any other apparatus;

"Registrar" means the Registrar of Motor Vehicles appointed under section 3;

"road" means any public road within the meaning of the **Roads Act** in the Partner States and includes any other road or way, wharf, car park, footpath or bridlepath on which vehicles are capable of travelling and to which the public has access;

"seat belt" means a belt or device fitted to motor vehicle and designed to restrain or limit the movement of a person who is seated in the motor vehicle if it suddenly accelerates or decelerates;

"tare weight" means the weight of a vehicle when unladen, inclusive of the weight of the body and all parts (the heavier being taken when alternative bodies or parts

are used) which are necessary to or ordinarily used with the vehicle when used on the road;

"semi-trailer" means any trailer designed to be coupled to a motor vehicle in such a way that part of it rests on the motor vehicle and that a substantial part of its weight and of the weight of its load is borne by the motor vehicle;

"taxicab" means any public service vehicle constructed or adapted to carry not more than seven passengers, exclusive of the driver, which is registered under any by-laws relating to the licensing and operation of taxicabs to ply for hire from a taxi rank or other public place within the area where such by-laws are in force;

"tractor" means a self-propelled motor vehicle constructed or adapted for the purpose of hauling trailers but which is not itself designed to carry goods or passengers;

"trailer" means any vehicle designed to be drawn by a motor vehicle, but does not include an integral sidecar, integral forecar or integral trailer attached to a motor cycle;

'transport service licence" means a licence granted under the provisions of this Act in respect of a public service vehicle;

"Treaty" means the Treaty for the Establishment of the East African Community;

'unladen weight" means the weight of a vehicle without any driver, passengers or load, but with a full supply of fuel, oil, grease, a spare wheel and with the tools which the vehicle normally carries;

"vehicle" means a vehicle of any description whatsoever, and includes a machine or implement of any kind drawn or propelled along roads whether by animal, mechanical, electrical or any other motive power.

PART II

ADMINISTRATIVE PROVISIONS

Registrar of motor vehicles 3 Subject to the provisions of any written law relating to the appointment of persons to the public service, Partner States shall establish or appoint the authorities competent in matters concerning motor vehicle registration and licensing, and notify to the East Africa Community Secretary such establishment or appointment, by notice in the national *Gazette*.

Other officers 4 (1) A Partner State shall, by notice in the national *Gazette*, appoint-

(a) vehicle inspectors; and

(b) examining officers,

and may, by notice in the national *Gazette*, appoint such other officers as may be necessary for the better carrying out of the purposes and provisions of this Act.

(2) A vehicle examiner appointed under subsection (1) of this section shall act under the general directions of the Registrar of motor vehicles

Registers 5 (1) The authorities appointed in accordance with the provisions of section 3 of this Act shall keep in the prescribed form-

(a) registers of all motor vehicles, trailers and engineering plants registered under this Act; and

(b) registers of all driving licences, issued under this Act.

(2) All information regarding motor vehicle registration shall be held on a central database which shall be administered by the authorities appointed under the provisions of section3 of this Act.

(3) Partner States shall assist one another in the implementation of this Act by exchange of information at bilateral or multilateral level in particular so as to check, before any registration of a vehicle, the latter's legal status, where necessary in the Partner State in which it was previously registered and such checking may in particular involve the use of an electronic network.

(4) All registers shall be open for inspection on demand by a police officer who shall be entitled to copy any entry in a register.

Searches 6 All registers in the custody of the authorities appointed under section 3 of this Act shall be open for inspection by members of the public during prescribed hours upon payment of the prescribed fee.

Certified copies 7 (1) The authorities appointed under section 3 of this Act shall, upon payment of the prescribed fee, furnish to an applicant a certified copy of any entry in any register.

(2) The copy of any entry in a register which is certified under the hand of the authorities appointed under section 3 of this Act shall be deemed to be a correct copy and shall be prima facie evidence of all statements contained therein in all court proceedings.

PART III

REGISTRATION OF MOTOR VEHICLES AND TRAILERS

Application of this Part 8 (1) This Part shall apply to all motor vehicles and trailers imported for use in the Partner States.

(2) This Part shall not, in relation to registration of motor vehicles and trailers, etc owned and operated by the Defence, Armed and Security Forces of the Partner State apply.

Registration of motor vehicles 9 (1) A person shall not own or drive a motor vehicle or trailer unless the motor vehicle or trailer is registered under this Act.

and trailers

(2) A person seeking registration of a motor vehicle or a trailer shall apply in the prescribed form to the authorities appointed under section 3 of this Act r.

(3) The authorities appointed under section 3 of this Act shall be the central registrar of all motor vehicles and trailers and of all licences, and shall keep the prescribed registers and shall register therein in the prescribed manner all licences issued under this Act and the particulars of every motor vehicle and trailer registered by him.

(4) The registers kept under sub-section (3) shall, during normal working hours, be open to inspection by the public on the payment to the authorities appointed under section 3 of this Act of a fee to be determined by the authorities appointed under section 3 of this Act.

Registering a motor vehicle in the Partner State of residence

10 (1) A person shall register his motor vehicle or trailer in the Partner State in which he is normally resident.

(2) Where a person has both personal and occupational ties in two Partner States, his or her normal residence, determined in the context of an overall assessment by reference to all the relevant facts, is that where the permanent centre of interests of that person is located; in the event that such an overall assessment does not result in its determination, primacy shall be given to personal ties.

(3) Where a vehicle is registered in one Partner State and a person seeks or intends to register his motor vehicle or trailer in a another Partner State, before being registered in a Partner State of destination, it shall be deregistered in the Partner State of origin.

Classification of motor vehicles, etc

11 For the purposes of registration under this Act, motor vehicles and trailers shall be divided into such classes as may be prescribed by regulations made by the Council.

Power to refuse registration

12 (1) The Registrar shall refuse to register any motor vehicle-

(a) which does not accord with the particulars contained in the application for the registration thereof;
(b) which is not roadworthy;
(c) which does not comply with vehicle design standards;
(d) in respect of which-
(i) a notice under **section 31 [Examination of motor vehicles, trailers, etc in connection with registration, etc]** has not been complied with;

(ii) a fee payable under this Part has not been paid.

(2) The authorities appointed under section 3 of this Act may refuse to register a motor vehicle in the class specified in the application for its registration if he considers that by reason of its design or construction or otherwise the vehicle is not suitable for registration in that class.

(3) The authorities appointed under section 3 of this Act may refuse to register any vehicle which is already registered.

Identification marks

13 (1) Upon the registration of a motor vehicle or trailer under **section 9 [Registration of motor vehicles and trailers]**, the authorities appointed

under section 3 of this Act shall assign to the motor vehicle or trailer an identification mark comprising-

(a) the prescribed prefix or distinctive letters indicating the registration Partner State in which the motor vehicle or trailer is registered;
(b) a separate number; and
(c) the prescribed suffix indicating the alphabetical order of registration of the motor vehicle or trailer.

(2) The authorities appointed under section 3 of this Act may, in such circumstances as it may determine **by regulations**, decide whether to withdraw an identification mark for the time being assigned to a motor vehicle or trailer.

(3) The authorities appointed under section 3 of this Act shall, upon any assignment or withdrawal made under sub-section (2), make all necessary and consequential amendments to the register.

(4) **Regulations may** require the identification mark assigned to a motor vehicle or trailer to be fixed in a prescribed manner to the motor vehicle or trailer, to any other motor vehicle drawn by the motor vehicle or to both, prescribe the size, the shape, colour, the character of the identification mark to be fixed on any motor vehicle or trailer, and any other matter for the effective implementation of this section.

Partner State identification marks or country code

14 Notwithstanding anything contained in section 13 of this Act, a vehicle registered in a Partner State shall use and display at appropriate side of the vehicle, distinctive letters or country code of the Partner State in which the vehicle has been registered as is provided for in international road traffic conventions or such other system of country coding as may be accepted by the Partner States.

Suspension of registration of unsafe motor vehicles, trailers, etc

15 (1) If the authorities appointed under section 3 of this Act are satisfied that a motor vehicle is unsafe for use on roads, he may suspend the registration of that motor vehicle.

(2) When the registration of a motor vehicle is so suspended, the authorities appointed under section 3 of this Act or any person authorized by the authorities appointed under section 3 of this Act, or any member of the police force, may remove the registration label from the vehicle and, for the purpose of so doing, may enter and remain on land or premises.

(3) If the authorities appointed under section 3 of this Act are subsequently satisfied that a vehicle the registration of which has been suspended under this section has been made safe for use on roads, they may remove the suspension, and if, at the time of the removal of the suspension, the period for which the vehicle was registered has not expired, the authorities appointed under section 3 of this Act must issue to the owner, without fee, a registration label similar to that removed from the vehicle under this section.

(4) The authorities appointed under section 3 of this Act must give to the owner of the vehicle concerned written notice of every suspension and removal of suspension under this section.

Using

16 (1) A person who uses or keeps a motor vehicle or trailer not being an exempt

unregistered motor vehicle, trailer, etc

motor vehicle on a road when the motor vehicle or trailer has not been registered or licensed **pursuant to this Act** commits an offence and is liable on summary conviction to a fine not exceeding **1000 currency units** or to a term of **imprisonment not exceeding 12 months** or to both.

(2) Notwithstanding anything contained in this section, the authorities appointed under section 3 of this Act may, by an authorization in writing, permit the use of an unregistered or unlicensed motor vehicle or trailer for a specified purpose on a specified road for a specified period.

Failure to return registration document

17 The registration document issued pursuant to regulations made under this Act remains the property of the authorities appointed under section 3 of this Act and, when required by the authorities appointed under section 3 of this Act to return the document, the registered owner, or any other person in possession of the document, fails to do so commits an offence and is liable on summary conviction to a fine **of** not **less than 500 currency units** or to a term of **imprisonment not exceeding six months** or to both.

Offence of not fixing identification mark

18 The owner of a motor vehicle or trailer being used or kept on a road commits an offence where the identification mark is not fixed as required by regulations made under this Act and is liable on summary conviction to a fine **of** not **less than 300 currency units** or to a term of **imprisonment not exceeding six months** or to both.

Obscured identification mark

19 When an identification mark fixed on a motor vehicle or trailer being used on a road is in any way-

(a) obscured; or
(b) rendered, or allowed to become, not easily distinguishable,

the owner commits an offence and is liable on summary conviction to a fine **of** not **less than 300 currency units** or to a term of **imprisonment not exceeding 6 months** or to both.

Motor vehicle dealer general registration certificate

20 (1) The authorities appointed under section 3 of this Act may on an application made to it and subject to prescribed conditions, issue a licence to-
(a) a manufacturer of motor vehicles or trailers;
(b) a tester of motor vehicles or trailers;
(c) a motor vehicle or trailer dealer; or
(d) a person who satisfies the authorities appointed under section 3 of this Act to trade in trade licence plates,
upon the payment of the prescribed fee.

(2) In the case of a motor vehicle dealer who is a manufacturer of motor vehicles, a licence is a licence for motor vehicles-
(a) which are from time to time temporarily in the dealer's possession in the course of his business as a motor vehicle dealer;
(b) kept and used by the dealer solely for the purpose of conducting research and development in the course of his business as a manufacturer; or
(c) which are from time to time submitted to the dealer by other manufacturers for testing on roads in the course of that business.

(3) In the case of any other motor vehicle dealer, a licence is a licence for motor vehicles which are from time to time temporarily in the dealer's possession in the course of his business as a motor vehicle dealer.

(4) In the case of a vehicle tester, a licence is a licence for motor vehicles which are from time to time submitted to the tester for testing in the course of his business as a vehicle tester.

(5) In the case of a trader, in licence plates, the trade licence plate shall be issued by the authorities appointed under section 3 of this Act to the trader to be hired out for the temporary use of individual vehicle importers, fleet dealers and fleet owners.

Surrender of trade licence 21 (1) A person may hold two or more trade licences.

(2) The holder of a trade licence may at any time surrender the licence to the authorities appointed under section 3 of this Act.

Use of motor vehicles by holders of trade licences 22 (1) The holder of a trade licence is not entitled by virtue of the licence-

(a) to use more than one motor vehicle at any one time except in the case of a motor vehicle drawing a trailer and used for a prescribed purpose.
(b) to use a motor vehicle for any purpose other than a purpose prescribed by regulations made under this Act.

(2) A motor vehicle in respect of which a trade licence has been granted shall not be used to carry any goods other than-

(a) a load which is carried solely for the purpose of testing or demonstrating the motor vehicle or any of its accessories or equipment and which is returned to the place of loading without having been removed from the motor vehicle except for that purpose or in the case of a crash;
(b) a load consisting of another motor vehicle used or to be used for travel from or to the place of delivery or collection in the case of a motor vehicle which is being delivered or collected;
(c) a load built in as part of the motor vehicle or permanently attached to it;
(d) a load which consists of parts, accessories or equipment designed to be fitted to the motor vehicle and of tools for fitting them to the motor vehicle; or
(e) a load which consists of a trailer but not a trailer which is for the time being defective or scrap.

Misuse of trade licence 23 A person who holds a trade licence or trade licences and uses-

(a) **at any one time** on a road a greater number of motor vehicles than the person is authorized to use by virtue of the trade licence or licences;

(b) a motor vehicle on a road for any purposes other than a purpose which has been prescribed by regulations; or

(c) the trade licence, or any of the trade licences, for the purposes of keeping on a road in any circumstances other than circumstances which have been prescribed, **a motor vehicle, which is not being used on that road;**

commits an offence and is liable on summary conviction to a fine of **not less than 250 currency units** or to a term of **imprisonment for a term not exceeding 6 months** or to both.

Registration of motor vehicle, trailer, etc owned by the Governments of Partner States or a Diplomatic 24 In lieu of registering a motor vehicle or trailer with the registering authority-

(a) the Council may direct a public officer to effect the registration of any motor vehicle or trailer owned by the Government of a Partner State and for that purpose the officer shall allot, as a registration mark, a letter or combination of letters approved by the Council together with a number to be borne by any such vehicle:
Provided that in the case of any such motor vehicle or trailer used by the

Mission

President, Vice President or Prime Minister of a Partner State, an emblem embodying the coat-of-arms of the respective Partner State shall be deemed to be a registration mark and number.

(b) The Ministry responsible for foreign affairs and international cooperation of each Partner State may register any motor vehicle or trailer-
(i) owned by a foreign government and used by its diplomatic representatives in a particular Partner State; or

(ii) owned by a person who is a diplomatic agent as defined by the Geneva Convention on Diplomatic Privileges by allotting a registration mark with letters CD and a number, to be borne by any such vehicle.

Notice of change of ownership

25 (1) Within fourteen days after the sale or other disposition of any kind whatsoever of any registered motor vehicle or trailer the person selling or otherwise disposing of it shall-

(a) notify the Registrar, in the prescribed form accompanied by the prescribed fee, of the sale or disposition, the name and address of the new owner, the mileage recorded on the odometer, if any, of the motor vehicle and of such further particulars as may be prescribed; and
(b) deliver the registration certificate of the motor vehicle or trailer to the Registrar.

(2) Subsection (1) of this section shall not apply to a change of possession consequent on a contract of hiring where the period of hiring does not exceed three months or where the registered owner continues to employ and pay the driver of the motor vehicle or trailer, as the case may be.

(3) Where a motor vehicle or trailer which is subject to a hire purchase agreement is lawfully repossessed under the terms of that agreement, the provisions of subsection (1) shall apply as if the registered owner had sold or otherwise disposed of the motor vehicle or trailer to the person entitled to repossess it:
Provided that in any such case subsection (1) shall apply as if references therein to the seller were references to the person so repossessing the vehicle.

(4) The authorities appointed under section 3 of this Act shall, in registering the change of ownership of a motor vehicle or trailer, make an entry thereof in the appropriate register and shall amend the certificate of registration accordingly or issue a new certificate of registration and deliver the amended certificate or the new certificate, as the case may be, to the new registered owner of the motor vehicle or trailer.

PART IV

CONSTRUCTION AND USE OF MOTOR VEHICLES, TRAILERS AND EQUIPMENT

Prohibition of sale of vehicles, etc not complying with regulations as to construction

26 (1) It shall not be lawful to sell or supply or to offer to sell or to supply for use on a road, a motor vehicle or trailer the construction of which does not conform to the **regulations** made under this Act.

(2) It shall not be lawful to alter a motor vehicle or trailer so as to render its structure such that the use thereof on a road in that condition would be unlawful by virtue of any **regulations** made under this Act.

(3) If a motor vehicle or trailer is sold, supplied, offered or altered in contravention of this section, any person who sells, supplies, offers or alters it or causes or permits it to be sold, supplied, offered or altered, commits and offence.

(4) A person shall not be convicted of an offence under this section in respect of the sale, supply, offer or alteration of a motor vehicle or trailer if he proves that he had reasonable cause to believe that the vehicle or trailer would not be used on a road in any of the Partner States, or would not be so used until it had been put into a condition in which it might lawfully be so used.

Use of vehicles in dangerous condition

27 (1) A person commits an offence if he causes or permits another person to use, a motor vehicle or trailer on a road when-

(a) the condition of the motor vehicle or trailer or of its accessories or equipment;
(b) the purpose for which it is used;
(c) the number of passengers carried by it, or the manner in which they are carried; or
(d) the weight, position or distribution of its load, or the manner in which it is secured,

is such that the use of the motor vehicle or trailer involves a danger of injury to any person or damage to property.

(2) A person who commits an offence under sub-section (1) is liable on summary conviction to a fine **not less than 250 currency units** or to a term **of imprisonment not exceeding 2 months** or to both.

(3) The use of motor vehicles and trailers on the road their construction and equipment and the conditions under which they may be so used shall be prescribed by **regulations** made under this Act.

Failure to comply with requirements for carriage of goods and persons, weights, etc, of commercial vehicles

28 (1) The carriage of persons and goods mixed together is hereby prohibited.

(2) A person who-

(a) contravenes sub-section (1); or
(b) contravenes or fails to comply with a requirement of any weight applicable to-
ii. a cargo vehicle; or
iii. a motor vehicle or trailer adapted to carry more than eight passengers; or
(c) uses on a road a vehicle which does not comply with such a requirement, or causes or permits a motor vehicle to be so used,

commits an offence and is liable on summary conviction to a fine **not exceeding 90 currency units** or to a term of **imprisonment not exceeding 12 months** or to both.

Liability for breach of roadworthiness requirements

29 When a person contravenes or fails to comply with a road worthiness requirement relating to the construction or equipment of a motor vehicle or trailer or the conditions under which it may be used on a road, the owner as well as any other person who has custody or control of the motor vehicle or trailer also commits the offence of which that person is guilty.

Interpretation in respect of this Part

30 In this Part, “construction and use requirements” means requirements, whether applicable generally or at specified times or in specified circumstances, imposed under this Part.

PART V

TESTS OF VEHICLES AND ISSUE OF ROADWORTHINESS CERTIFICATES

Power to fix the age of motor vehicles, trailers, etc

31 (1) The Minister of a respective Partner State may, having regard to the public safety, convenience and objects of this Act in the respective Partner State, by notification in the *Gazette*, specify the life of a motor vehicle or trailer reckoned from the date of its manufacture, after the expiry of which the motor vehicle shall not be deemed to comply with the requirements of this Act and the regulations hereunder:

Provided that the Minister of a respective Partner State may specify different ages for different classes or different types of motor vehicles.

(2) Notwithstanding anything contained in subsection (1) of this section, the Minister of a respective Partner State may, having regard to the purpose of a motor vehicle, such as display or use for the purposes of a demonstration in any exhibition, use for the purpose of technical research or taking part in a vintage rally, by notification in the *Gazette*, exempt by a general or special order, subject to such conditions as may be specified in such notification, any class or type of motor vehicle from the operation of subsection (1) of this section for the purpose to be stated in the notification

(3) Notwithstanding anything contained in this Act, no prescribed authority or authorized testing station shall grant a certificate of fitness or roadworthiness to a motor vehicle in contravention of the provisions of any notification issued under subsection (1) of this section.

Examination of motor vehicle, trailer, etc, in connection with registration, etc

32 (1) Before-

(a) registering a motor vehicle or trailer;
(b) issuing a duplicate registration document to the registered owner of a motor vehicle or trailer;
(c) returning the registration document to a new registered owner;
(d) licensing a motor vehicle or trailer; or
(e) entering in the register any alterations to a vehicle notified under this Act,

the authorities appointed under section 3 of this Act may, by notice given in the manner provided in subsection (2) of this section, require production of a vehicle of any class for examination at such vehicle examination centre as the authorities appointed under section 3 of this Act may determine for the purpose of ascertaining whether a vehicle-

(i) accords, as the case may be, with the particulars contained in the application for registration or for the vehicle licence or in the notice of transfer of ownership, or with the particulars contained in the register, or with the alterations notified under this Act;

(ii) is roadworthy;

(iii) complies with vehicle design standards;

(iv) complies with this Act and any conditions subject to which a vehicle licence was issued in respect of the vehicle.

(2) A notice under subsection (1) of this section may-

(a) be given in writing in respect of a particular vehicle and served either personally or by registered post on the owner, the registered owner, or the new owner of any such vehicle;
(b) be given by publication in the *Gazette* and in one Kiswahili, French and one English newspaper as the case may be circulating in Partner State in respect of a vehicle of any class and by reference to model, country of origin, date of manufacture or any other thing;
(c) in the case of a notice given under paragraph (a) of this subsection, specify the date and time that the vehicle is to be produced for examination;
(d) in the case of a notice given under paragraph (b) of this subsection, include such advice and information as appears to the Registrar to be required to enable the examination of a vehicle at a date and time to be specified by the Registrar or by any person authorized to operate a place as a vehicle examination centre.

(3) A vehicle produced at a vehicle examination centre pursuant to subsection (1) of this section may be detained for a period not exceeding 24 hours.

(4) The fee for a vehicle examination under this section shall be payable-

(a) in the case of a notice given under subsection (2)((a) upon receipt of the notice requiring the vehicle to be produced for examination;
(b) in the case of a notice under subsection (2) (b) of this section, upon the specifying of a date and time for the examination of the vehicle under subsection (2) (d) of this section.

Tests of condition of motor vehicle

33 (1) A vehicle used on a road shall be submitted for examination in accordance with this Act or regulations made under this Act.

(2) Unless otherwise provided for under this Act in respect of cargo vehicles or any class of motor vehicles, this Part applies to all motor vehicles used on a road.

(3) The examination shall be conducted every six months in respect of commercial vehicles and once every year in respect of private vehicles or within such other prescribed period and shall be conducted to determine that-

(a) the motor vehicle conforms to the prescribed requirements relating to the construction and condition of the motor vehicle, its accessories and other equipment; and
(b) the condition of the motor vehicle is such that its use on the road will not involve a danger of injury to any person or damage to property.

(4) There shall be charged for any vehicle examination under this section such fee as may be prescribed by the authorities appointed under section 3 of this Act and for any vehicle that meets the prescribed standards of fitness, there shall be issued a certificate of fitness prescribed by the Council of Ministers and signed by the manager of the testing station.

(5) A certificate of fitness shall-

(a) be valid for a period not exceeding one year but the possession of a valid certificate of fitness does not relieve an owner or driver of a defective vehicle of any responsibility, whether civil or criminal, arising from the defect;
(b) bear all relevant data, including the identity of the testing station that issued it, the expiry date and such other particulars as may be prescribed by the authorities appointed under section 3 of this Act.

Examination orders for examination of vehicles

34 The authorities appointed under section 3 of this Act or any police officer may serve or cause to be served personally on the driver, or by registered post on the registered vehicle owner, of a vehicle examination order in a form specified by the authorities appointed under section 3 of this Act requiring production of the vehicle for examination at such vehicle examination centre, and at such time on such date, as shall be specified in the examination order, for the purpose of ascertaining whether the vehicle-

(a) accords with the particulars thereof contained in the register;

(b) is road worthy;

(c) complies with vehicle emission standards;

(d) complies with this Act and any conditions subject to which a vehicle licence was issued in respect of the vehicle.

Persons to conduct examination of vehicles, trailers, etc

35 (1) The examination of vehicles shall be conducted by the Registrar or any other examiner designated or authorized by the authorities appointed under section 3 of this Act.

(2) The authorities appointed under section 3 of this Act may for the purposes of its motor vehicle examination functions under this Act-

(a) maintain motor vehicle centres where examinations may be conducted;
(b) maintain the equipment for conducting the examinations; and
(c) designate private motor vehicle testing stations where vehicle examinations may be conducted on its behalf.

Examination of motor vehicle, trailer, etc on road by police officer or motor vehicle examiner and removal to motor vehicle examination centre or police station

36 (1) A vehicle examiner, hereinafter called an "authorized vehicle examiner", or police officer may examine or cause to be examined by a vehicle examiner, a vehicle which is being used on a road for the purposes of ascertaining whether a vehicle complies with this Act and any condition subject to which the vehicle licence in respect of the vehicle was issued.

(2) Any police officer or vehicle examiner who, as a result of an examination of a vehicle under subsection (1) of this section, has reason to believe that-

(a) the vehicle has been involved in an accident;

(b) the vehicle is not road worthy;

(c) the vehicle does not comply with vehicle emission standards; or

(d) the vehicle does not comply with this Act or any condition subject to which the vehicle licence in respect of the vehicle was issued,

may-

(I) direct the driver of the vehicle to drive it to such vehicle examination centre or police station as the police officer or vehicle examiner may specify; or

(ii) direct the driver and other person to leave the vehicle and himself drive or remove the vehicle or cause to be driven or removed to any vehicle examination centre or police station, and may cause the vehicle to be detained at a vehicle examination centre or police station for not more

than 72 hours while the vehicle is examined by a vehicle examiner.

(3) A police officer or vehicle examiner who-

(a) directs a driver to drive a vehicle; or

(b) drives or removes a vehicle or causes it to be removed, to a vehicle examination centre or police station under subsection (2) of this section shall serve on the driver of the vehicle a notice specifying-

(I) his belief that the vehicle has been involved in an accident;

(ii) the respect in which he believes the vehicle is not roadworthy;

(iii) the respect in which he believes the vehicle does not comply with vehicle emission standards; or

(iv) the respect in which he believes the vehicle does not comply with this Act or any condition subject to which the vehicle licence in respect of the vehicle was issued.

(4) Where it appears to a police officer that, by reason of an accident having occurred owing to the presence of a motor vehicle on a road, it is necessary that a test should be carried out immediately, the police officer may require it to be carried out and, if the police officer is not to carry it out personally, may require that the motor vehicle shall not be taken away until the test has been carried out by a vehicle examiner.

(5) Notwithstanding the provisions of subsection (4) of this section, where the presence of the vehicle may pose a danger, or damage property, the police officer may authorize the removal of the vehicle to a designated place for testing.

(6) Nothing in this section shall be deemed to authorize any person who is not the holder of a valid driving licence for a vehicle of the appropriate class to drive any vehicle in the course of any removal or examination.

(7) Any person who obstructs a police officer or a vehicle examiner acting under this section, or fails to comply with a requirement or direction of a police officer or vehicle examiner under this section commits an offence and is liable on summary conviction to a fine **not exceeding 280 currency units** or to a term of **imprisonment not exceeding 12 months** or to both.

(8) A vehicle examiner shall produce the examiner's authority to act for the purpose of this section if required to do so.

(9) In this section, references to a motor vehicle include reference to a trailer drawn by it.

Examination of commercial motor vehicles

37 (1) An authorized vehicle examiner or a police officer may at any time-

(a) examine a commercial vehicle and for that purpose detain the vehicle during such time as is required for the examination; and

(b) which is reasonable having regard to the circumstances of the case, enter any premises on which the examiner or officer has reason to believe that a commercial vehicle is kept and an authorized tester may exercise the powers given by paragraph (a) in relation to any commercial vehicle brought to a place of examination.

(2) The power conferred by subsection (1) of this section to examine a commercial vehicle includes power to test it and drive it for the purpose of testing it.

(3) An authorized vehicle examiner or a police officer may at any time require a person in charge of a commercial vehicle and which is stationary on a road to proceed with the vehicle for the purpose of having it examined under this section to any place where an examination can be suitably carried out.

(4) A person in charge of a commercial vehicle who refuses or neglects to comply with a requirement made under subsection (3) of this section commits an offence and is liable on summary conviction to a fine **not exceeding 20 currency units** or to **imprisonment for a term not exceeding 3 months** or to both such fine and imprisonment.

Power to prohibit driving of unfit motor vehicles

38 (1) Where, upon the examination of a motor vehicle, it appears to the vehicle examiner or an authorized tester or police officer that owing to any defects in the motor vehicle, it is, or is likely to become, unfit for service, that examiner or tester or police officer may prohibit the driving of the motor vehicle on a road-

(a) absolutely; or
(b) for one or more specified purposes.

(2) Where, upon the examination, it appears to a police officer that owing to any defects in the motor vehicle, driving it would involve a danger or injury to any person or property, the police officer may prohibit the driving of the motor vehicle on any road-

(a) absolutely; or
(b) for one or more specified purposes.

(3) A prohibition under this section shall come into force at a time not later than ten days from the date of the examination as seems appropriate to the vehicle examiner or authorized tester or police officer imposing the prohibition, having regard to all the circumstances, and a prohibition shall continue in force until it is removed under this Act.

(4) A person imposing a prohibition under this section shall give notice in writing of the prohibition to the person in charge of the motor vehicle at the time of the examination-

(a) specifying the defects which occasioned the prohibition;
(b) stating the relevant prohibition; and
(c) stating whether the prohibition is to come into force immediately or at the end of a specified period.

(5) Where a notice is given under subsection (4) of this section, any vehicle examiner or police officer may grant an exemption in writing for the use of the motor vehicle in such manner and subject to such conditions and for such purposes as may be specified in the exemption.

Prohibition conditional on examination

39 (1) Where it appears to the person imposing a prohibition under this Act that the motor vehicle is adapted to carry goods or passengers, or is a public service vehicle not so adapted to carry passengers or goods, the prohibition may be imposed with a direction not to remove the vehicle unless and until the motor vehicle has been examined at an official testing station.

(2) In any other case, a prohibition may be imposed with a direction not to remove the motor vehicle unless and until the motor vehicle has been examined in accordance with regulations made under this Act.

Power to prohibit driving of cargo vehicle

40 (1) Subsections (2) and (3) of this section shall apply where a cargo vehicle or a motor vehicle adapted to carry passengers or goods has been weighed in pursuance of a requirement imposed under this Act or any other law on over load control and it appears to-

(a) a vehicle examiner;
(b) a person authorized with the consent of the Registrar to act for the purposes of this subsection; or
(c) a police officer authorized to act for those purposes by a senior police officer,

that the limit imposed by construction and use requirements with respect to any description of weight which is applicable to that motor vehicle has been exceeded or would be exceeded if it were used on a road because of excessive overall weight or excessive axle weight on any axle and that, driving the motor vehicle would involve a danger or injury to any person or cause damage to property.

(2) A person referred to in subsection (1) of this section may, whether or not a notice is given under this Act, give notice in writing to the person in charge of the motor vehicle prohibiting the driving of the motor vehicle on a road until-

(a) the weight is reduced to that limit or it is no longer excessive; and
(b) official notification in writing has been given to the person in charge of the motor vehicle that, it is permitted to proceed.

(3) A person referred to in subsection (1) of this section may, also by direction in writing, require the person in charge of the motor vehicle to remove it to the place and subject to the conditions specified in the direction.

(4) Official notification for the purposes of subsection (2) of this section may be withheld until the motor vehicle is weighed or reweighed in order to satisfy the person giving the notification that the weight has been reduced to the prescribed limit.

Power of motor vehicle examiner on examination of motor vehicle

41 In carrying out an examination of a vehicle for the purposes of the provisions of this Act, a vehicle examiner may carry out or cause to be carried out such inspection, examination or test of the vehicle, any part of the vehicle, any accessory affixed to the vehicle or any equipment or part of the equipment of the vehicle as he thinks fit and may weigh the vehicle or any load on the vehicle.

Motor vehicle not in accordance with particulars in register, form of application for registration or

42 (1) Where on examination of a motor vehicle under this Part, a vehicle examiner finds that a vehicle does not accord with the particulars of the vehicle-

(a) entered in the register;
(b) contained in an application for registration or notice of transfer of ownership,

the vehicle examiner shall notify the authorities appointed under section 3 of this Act and shall serve notice personally or by registered post-

notice of transfer

(I) on the owner of the vehicle or on the person who produced the vehicle for examination if he is present during the examination; and

(ii) where appropriate, on the new owner.

(2) A notice under subsection (1) of this section shall-

(a) be in a form specified by the Registrar; and

(b) specify the manner in which the vehicle does not accord with the particulars of the vehicle-

(I) entered in the register;

(ii) contained in the application for registration or notice of transfer of ownership.

Motor vehicle not roadworthy or not in accordance with this Act or condition of motor vehicle licence

43 (1) When, on the examination of a motor vehicle under this Part, it appears to the vehicle examiner that-

(a) the vehicle is not roadworthy;

(b) the vehicle does not comply with vehicle emission standards;

(c) the vehicle identification number has been altered or tampered with; or

(d) the vehicle does not comply with this Act or any conditions subject to which a vehicle licence was issued in respect of the vehicle,

he shall-

(I) if he considers that the use of the vehicle on a road would be dangerous to other road users, or that the vehicle identification number has been altered or tampered with, refer the vehicle to a specially authorized vehicle examiner;

(ii) in any other case, make a vehicle repair order.

(2) Where a specially authorized vehicle examiner considers that the use on a road of a vehicle examined under this Part would be dangerous to other road users, or that the vehicle identification number of the vehicle has been altered or tampered with, he shall make a suspension of vehicle licence order and cause the vehicle licence to be removed from the vehicle.

(3) The suspension of vehicle licence order shall-

(a) be in a form specified by the authorities appointed under section 3 of this Act;

(b) except where the order is made because of altering or tampering with the vehicle identification number of the vehicle, require the registered owner of the vehicle to cause to be carried out the repairs or other work specified in the order;

(c) specify the conditions on which the vehicle may be moved or driven on a road and in particular specify the manner in which the vehicle may be moved from and to the vehicle examination centre; and

(d) be served personally or by registered post-

(I) on the registered owner of the vehicle; or

(ii) on the person who produced the vehicle for examination if he is present during the examination.

(4) Except where the suspension of vehicle licence order is made because of altering or tampering with the vehicle identification number of the vehicle, a suspension of vehicle licence order, shall continue in force in respect of a vehicle until the repairs or other work required thereby have been carried out satisfactorily.

(5) Where a suspension of vehicle licence order is made because of altering or tampering with a vehicle identification number of a vehicle, the order shall continue in force until the vehicle identification number of the vehicle to which the order relates has been verified to the satisfaction of the Registrar as being the same as that contained in the relevant particulars of the register.

(6) Where a suspension of vehicle licence order is in force in respect of a vehicle,

the registered owner may produce the vehicle at such vehicle examination centre and at such time and on such date as may be specified by the authorities appointed under section 3 of this Act for examination by a vehicle examiner to ascertain whether the repairs or other work required by the order have been carried out satisfactorily, or the altering or tampering of the vehicle identification number of the vehicle has been verified in accordance with subsection (5) of this section, as the case may be, and if such repairs or other work are found to have been so carried out, or the vehicle identification number of the vehicle has been so verified, a specially authorized vehicle examiner shall cancel the suspension of vehicle licence order forthwith and restore the vehicle licence to the registered owner.

(7) Where a suspension of vehicle licence order is in force in respect of a vehicle, any person who moves or drives that vehicle on a road except in accordance with the suspension of vehicle licence order, commits an offence and on summary conviction is liable to a fine of **525 currency units** and to **imprisonment for six months**.

(8) A vehicle repair order shall-

(a) be in a form specified by the Registrar;
(b) require the registered owner of the vehicle to-
(I) cause to be carried out the repairs or other work specified in the order;
(ii) produce the vehicle at such vehicle examination centre and at such time and on such date or within such period as shall be specified in the order; and
(c) be served personally or by registered post-
(i) on the registered owner of the vehicle; or
(ii) on the person who produced the vehicle for examination if he is present during the examination.

(9) If, on the examination of a vehicle produced at a vehicle examination centre in accordance with a vehicle repair order, the vehicle examiner is not satisfied that the repairs or other work required by the order have been carried out satisfactorily, he may make a further vehicle repair order under this section.

(10) The registered owner of a vehicle in respect of which a vehicle repair order has been made who fails to produce the vehicle for examination at the vehicle examination centre specified in the order at the time and on the date specified in the order, or on such further date and at the times as the registrar may allow in any case, commits an offence and is liable on summary conviction to a fine of **700 currency units**.

Removal of prohibitions

44 (1) A prohibition may upon application therefore, be removed by an authorized officer of the authorities appointed under section 3 of this Act if the officer is satisfied that the motor vehicle is roadworthy.

(2) A person aggrieved by a refusal to remove a prohibition under subsection (1) of this section or by a vehicle examiner or police officer may appeal to the Minister.

(3) The Minister may within a reasonable time, make such order on the appeal as the Minister thinks fit.

(4) Where the authorized officer removes a prohibition, the officer shall immediately give notice of the removal to the owner of the motor vehicle or other person who has custody or control of the motor vehicle.

(5) The authorities appointed under section 3 of this Act may require the payment of fees, in accordance with prescribed scales and rates, for the inspection of a motor vehicle with a view to the removal of a prohibition; and payment of fees

may be required to be made in advance.

(6) Regulations may prescribe anything which may be prescribed under this section and for regulating the procedure, and fees payable, and appeals to the Minister under subsection (2) of this section.

Fitting and supply of defective or unsuitable motor vehicle parts

45 (1) A person who-

(a) supplies or fits a motor vehicle part or a motor vehicle; or
(b) causes or permits a motor vehicle part to be fitted to a motor vehicle, in such circumstances that the use of the motor vehicle on a road would, by reason of that part being fitted to the motor vehicle, involve a danger or injury to any person or damage to property or constitute a contravention of, or failure to comply with, any of the construction and use requirements,

commits an offence and is liable on summary conviction to a fine **not exceeding 90 currency units** or to a term of **imprisonment not exceeding 12 months** or to both.

(2) An authorized motor vehicle examiner may, at any reasonable time, enter premises, where, in the course of a business, motor vehicle parts are fitted to motor vehicles or are supplied, test and inspect any motor vehicle or motor vehicle part found on those premises, for the purposes of ascertaining whether-

(a) a motor vehicle part has been fitted to a motor vehicle in such circumstances that the use of the motor vehicle on a road would, by reason of that part being fitted to the motor vehicle, constitute a contravention of, or failure to comply with any of the construction and use requirements or involve a danger or injury to any person or damage to property; or
(b) the motor vehicle part could not be supplied for fitting to a motor vehicle used on the road without the commission of an offence under this Act.

(3) For the purposes of testing a motor vehicle and any trailer drawn by the motor vehicle, the vehicle examiner may drive it and for the purpose of testing a trailer, may draw the trailer with the motor vehicle.

(4) A person who obstructs a vehicle examiner acting under subsection (2) or (3) of this section commits an offence and is liable on summary conviction to a fine **not exceeding 20 currency units** or to a term of **imprisonment not exceeding 2 months** or to both.

PART VI

LICENSING OF MOTOR VEHICLES AND TRAILERS

Motor vehicles and trailers to be licensed

46 (1) No person shall own or possess a motor vehicle or trailer, or use it on a road, unless such vehicle or trailer is licensed under and in accordance with this Part.

(2) Where the owner or person in possession of a motor vehicle or trailer gives written notice to the authorities appointed under section 3 of this Act that for a stated period he does not intend that it shall be used on any road, or where he satisfies the authorities appointed under section 3 of this Act that for a stated period such vehicle or trailer was not used on any road, he shall not, after the receipt of such notice by the authorities appointed under section 3 of this Act or, as the case may be, after the authorities appointed under section

3 of this Act are so satisfied, be liable to conviction under or by virtue of this section by reason only of his ownership or possession of the vehicle or trailer during the stated period.

(3) The Council of Ministers may by notice in the *Gazette* exclude any vehicle, or any class or description of vehicle, from the operation of all or any of the provisions of this Part

Application for licence 47 Applications for licences under this Part shall be made to a licensing officer in the prescribed form accompanied by the fee payable and the vehicle registration book

Conditions for issue of licence 48 (1) A licensing officer shall issue a licence only if he is satisfied-

(a) that the vehicle is duly registered; and

(b) that the particulars in the registration book are correct; and

(c) that the vehicle is insured against third party risks in accordance with provisions of the national Insurance (**Motor Vehicles Third Party Risks**) Act; and

(d) that the licence in respect of such vehicle has not been cancelled under this Act

(2) Before issuing a licence in respect of any motor vehicle or trailer of a class prescribed for the purposes of this subsection, a licensing officer shall require the applicant to produce an inspection report showing that the vehicle or trailer has been examined by an inspector during the months immediately preceding the commencement of the licence and that the vehicle or trailer complies with the provisions of this Act and of any rules made there under:

Provided that no such inspection report shall be required in the case of a vehicle which is intended to be used as an omnibus and in respect of which a certificate of fitness issued under the provisions of this Act, and dated not earlier than ten months before the commencement of the licence, is produced.

(3) Where under this section the owner of any vehicle or trailer is required to have it examined by an inspector, he shall make application in the prescribed form, paying such fee as may be prescribed, and thereupon an inspector shall examine the vehicle or trailer and shall issue an inspection report in the prescribed form.

Vehicle inspection certificates 49 (1) Where-

(a) an inspector issues an inspection report for the purposes of **subsection 48(2)[Conditions for issue of licence]** showing that a motor vehicle or trailer complies with the provisions of this Act and of any rules made there under; or

(b) a certifying officer issues a certificate of fitness in respect of a public service vehicle under the provisions of this Act,

the inspector or the certifying officer, as the case may be, shall affix to the vehicle or trailer in the prescribed manner an inspection certificate in the prescribed form.

(2) The inspection certificate shall relate to and bear the same number as the inspection report or certificate of fitness, as the case may be.

(3) No motor vehicle or trailer of a class prescribed for the purpose of **section 48(2) [Conditions for issue of licence]** shall be used on a road unless an inspection certificate which is-

(a) valid and in force at the time; and

(b) legible and in no way defaced or mutilated, is affixed to the vehicle or trailer.

Form of licences 50 Every vehicle licence shall be in the prescribed form

Licences to be carried on vehicle 51 No vehicle which is required to be licensed shall be used on a road unless the licence, which shall be eligible and in no way defaced, is carried on the vehicle in the prescribed manner

Duplicate licences 52 If a vehicle licence is lost, defaced, mutilated or rendered illegible, the authorities appointed under section 3 of this Act shall issue a duplicate licence on payment of the prescribed fee:

Provided that any licence which has been lost and is subsequently found shall forthwith be returned to the authorities appointed under section 3 of this Act for cancellation**.**

Recovery of licence fee by civil process 53 Where under this Part a licence is required and has not been obtained, a sum equal to the prescribed fee payable in respect of such licence shall be due and owing to the national Controller of Inland Revenue by the person failing to obtain the licence, and shall be a civil debt recoverable summarily at the instance of the national Controller of Inland Revenue.

Penalties under this Part 54 (1) Any person who contravenes or fails to comply with any of the provisions of this Part shall be guilty of an offence and liable on first conviction to a fine not exceeding 50 currency units or to imprisonment for a term not exceeding three months, and on each subsequent conviction to a fine not exceeding 100 currency units or to imprisonment for a period not exceeding six months or to both.

(2) If any person is convicted of an offence under this section in a case where a licence fee under this Part is payable and has not been paid, the court may, whether or not any other penalty is imposed, impose a fine, which shall be disposed of in the same manner as the fee payable on the licence, of an amount equivalent to the fee unpaid, and the payment of such fine shall operate in satisfaction of any civil debt due under **section 53 [Recovery of licence fee by civil process].**

PART VII

LICENSING OF PUBLIC SERVICE AND GOODS VEHICLES

Classification of vehicle operator's licences 55 (1) Licences issued by the transport regulator under this Part of this Act shall be divided into the following classes-

(a) public omnibus operator's licence;
(b) temporary public omnibus operator's licence;
(c) contract omnibus operator's licence;
(d) temporary contract omnibus operator's licence;
(e) goods vehicle operator's licence;
(f) breakdown operator's licence;
(g) emergency and fire service vehicle operator's licence;
(h) town taxicab operator's licence;
(i) country taxicab operator's licence;
(j) rental vehicle operator's licence;
(k) basic licence; and
(l) special licence.

(2) A tourist agent vehicle operator's licence shall be issued after the applicant has obtained the necessary permission to operate as a tourist agent.

National transport regulator to organize public transport and keep statistics

56 (1) The national transport regulator shall cause the road passenger transport industry to be organized, as far as possible, on a route basis, and the business shall be divided into express and local services in such a way that licensed operators keep within their catchments areas and on the routes for which they are licensed.

(2) The national transport regulator shall furnish to the Minister once in every year a list of routes and packages of routes covering the whole of Partner State, selected and assembled so as to provide transport services to meet reasonable passenger demand and which will be reasonably efficient and economic either as listed singly or otherwise for both large and small prospective operators.

(3) In compiling the routes and packages for route due regard and consideration shall be given to-

(a) the needs of the public;
(b) the desirability of providing services which are both efficient and economic;
(c) the coordination, so far as possible, of all forms of passenger transport both in any particular area and in the whole of the partner State;
(d) any decision of the Minister or the High Court or any court arising from petitions made under this Act in regard to licensing of public service vehicles; and
(e) the transport policy agreed upon between Partner States.

(4) The national transport regulator shall for the purposes of subsections (2) and (3) of this section make or cause to be made a regular collection, storage and analysis of comprehensive road transport data and statistics in respect of road vehicles used for the carriage of passengers and goods for hire and reward and passengers and goods carried and the industry generally, including, but not limited to, vehicle operating costs, road factors, frequency and efficiency of services and passenger demand.

Omnibus and country taxicab operator's licence

57 (1) Subject to this Act, a public omnibus and a country taxicab operator's licence shall authorize the holder of the licence-

(a) to run a service for the carriage of passengers over such fixed route or routes as the national transport regulator may direct;
(b) to run a scheduled service over such routes at such frequency and regularity as the national transport regulator may direct; and
(c) to incorporate such intermediate stops on any route as the transport regulator may direct.

(2) A private omnibus operator's licence shall authorize the holder of the licence to run an omnibus for the carriage of passengers subject to the conditions specified in the licence.

(3) A contract omnibus operator's licence shall authorize the holder of the licence-

(a) to contract with any person or group of passengers to carry passengers between such places as the national transport regulator may direct;
(b) to charge such fixed amount for the hire of the omnibus to carry passengers between different places as the national transport regulator may direct.

Procedure of national transport regulator for public omnibus and country taxicab operator's licence

58 (1) Within one month after receipt of the information under **sections 56(2) and 56(3) [National transport regulator to organize public transport and keep statistics]**, the national transport regulator shall cause it to be published in the national *Gazette* and at least one national language newspaper and one newspaper in a language that is widely spoken circulating in the Partner State for the information of the public and prospective public omnibus and country taxicab operators and shall invite applications from those operators to assist the national transport regulator in its subsequent deliberations.

(2) Not less than two months after the advertisement has been published under subsection (1) of this section, the national transport regulator shall meet to consider, allocate and offer one or more of the previously advertised routes or packages of routes to prospective transport operators.

(3) Within fourteen days after the receipt of a notification of the decision of the national transport regulator, the prospective operator shall signify in writing his unconditional acceptance or rejection of any offer received, as the case may be.

Grant of omnibus and country taxicab operator's licence

59 (1) Subject to this section, the national transport regulator may grant to an applicant an omnibus or a country taxicab operator's licence of the class applied for to provide such services as may be specified in the licence; but the national transport regulator shall not grant an operator's licence for an omnibus or country taxicab, unless it has received an unconditional acceptance of an offer made to the operator under **section 58(3) [Procedure of national transport regulator for public omnibus and country taxicab operator's licence]**.

(2) The national transport regulator shall not offer, grant or renew a public omnibus or country taxicab operator's licence to any person who-

(a) has been convicted of an offence involving fraud or dishonesty within two years before the date of his application;
(b) is in breach of a condition of any previously held operator's licence;
(c) has had a public service operator's licence of any type held by him cancelled under this Act or any other enactment,

and shall have due regard to the reliability, character and financial stability of that person, the condition of his motor vehicles and the facilities at his disposal for the general maintenance of service on the route or routes or combination of routes.

(3) In considering the grant of a private and contract omnibus operator's licence, the national transport regulator shall have due regard to-

(a) the needs of the public;
(b) the coordination, so far as possible, of all forms of passenger transport both in any particular area and in the whole of the Partner State;
(c) the interests of any person holding omnibus operator's licences over any route or routes or part of routes, and of any persons who are providing transport facilities along or near the route or routes or combination of routes concerned;
(d) any representation or objection relating to the grant of the licence lodged with the national transport regulator under this Act or regulations;
(e) agreed transport policy of other Partner States.

(4) A private and contract omnibus operator's licence shall be the duration of a licensing year and may be granted subject to such terms and conditions as

the national transport regulator may think fit to impose.

(5) The national transport regulator shall not grant or renew a private omnibus operator's licence to any applicant who-

(a) has been convicted of an offence involving fraud or dishonesty within two years from the date of application;
(b) is in breach of a condition of his operator's licence;
(c) has had a public service operator's licence of any type held by him cancelled under this Act or any other enactment.

(6) Unless earlier revoked, a public omnibus and a country taxicab operator's licence shall be for a period of **five years** after which it shall be subject to review as provided for in **subsection 56(2) and 56(3) [National transport regulator to organize public transport and keep statistics, etc]**.

(7) An omnibus operator's licence shall not be transferred except with the consent of the national transport regulator.

(8) The national transport regulator shall not issue an omnibus or country taxicab operator's licence under this Act unless it is satisfied that the motor vehicle in respect of which a licence is required complies with the requirements of this Act and the regulations.

Public omnibus and country taxicab operator to give notice to the national transport regulator

60 (1) A licensed public omnibus or country taxicab operator shall give a minimum of six month's notice to the transport regulator of his intention to surrender his licence or of his intention not to seek renewal of his licence after its expiration.

(2) Any person who causes a breakdown in any sector of the road transport industry or a deterioration in service to the public by failure to give the required notice specified by subsection (1), or by failure to comply with conditions attached to his operator's licence which results in that licence being revoked by the transport regulator under **section 59(6) [Grant of omnibus and country taxicab operator's licence]**, commits an offence and is liable on conviction to a fine of **not less than 200 currency units** and **not exceeding 500 currency units**.

(3) Where it is proved that any body of persons, whether corporate or unincorporated, has committed an offence under subsection (2) of this section any person who, at the time of the commission of the offence, was a director, partner or responsible officer of that body shall also be liable to the penalties prescribed for the offence unless he proves that the offence was committed without his knowledge or consent and that he took all reasonable steps to ensure compliance with the relevant provisions.

Road service not to be suspended without permission

61 (1) Where the holder of an operator's licence wishes to suspend the operation of any service authorized under the licence held by him otherwise than for reasons beyond his control, he shall obtain the prior permission of the national transport regulator.

(2) In requesting permission under subsection (1) of this section, the holder shall state the reasons and the period for which he wishes it to remain in force.

(3) In any case, when the service is suspended for reasons beyond the control of the holder of the licence and where the duration of the suspension exceeds three days, the holder of the licence shall send notification of the suspension to the national transport regulator.

(4) Any person who contravenes this section commits an offence and is liable upon conviction to a fine **not exceeding 600 currency units** or to **imprisonment for a term not exceeding twelve months** or to both

Temporary replacement of authorized vehicles

62 (1) Where a vehicle specified in an operator's licence for a public service has been destroyed, rendered unfit for service or withdrawn from service for overhaul or repair, and the holder of the licence desires permission until that vehicle is replaced or rendered fit for service again for the temporary use in its place of another vehicle which vehicle he is not authorized to use under his existing licence, and the carrying capacity of which does not exceed by more than 10 percent the carrying capacity of the specified vehicle, he may apply by letter to the national transport regulator requesting permission to use the substitute vehicle in place of the specified vehicle.

(2) The holder shall, if the national transport regulator so requires, send to the national transport regulator the vehicle licence and registration plates of the specified vehicle.

(3) If the national transport regulator decides to grant permission, it shall, if it thinks it necessary, retain the vehicle licence and registration plates of the specified vehicle so long as the substitute vehicle remains in use.

(4) Upon the return to the national transport regulator of the vehicle licence of the substitute vehicle, the national transport regulator shall return to the licence holder the vehicle licence and registration plates of the specified vehicle if it has been in its possession.

(5) The permission granted under this section shall be valid for a period of three months after which it shall expire.

Duration of licence

63 (1) A licence granted under **sections 59 [Grant of omnibus and country taxicab operator's licence], 65 [Temporary public omnibus operator's licence], 68 [Grant of goods vehicle operator's licence] or 71 [Grant of town taxicab, country taxicab and rental vehicle operator's licence]** shall remain in force for the period stated on the licence or until it is revoked by the national transport regulator or until it is surrendered by the holder of the licence.

(2) A licence granted under **sections 59 [Grant of omnibus and country taxicab operator's licence], 66[Temporary public omnibus operator's licence], 69[Grant of goods vehicle operator's licence] or 72 [Grant of town taxicab, country taxicab and rental vehicle operator's licence] or 80 [Goods vehicles to be licensed to carry passengers]** shall not be transferred or assigned except with the prior consent in writing of the national transport regulator.

(3) An application for the consent of the national transport regulator to transfer or assign a licence shall be made in writing in such form as the national transport regulator may direct.

Extension of routes

64 The national transport regulator may, at any time extend or vary any route or combination of routes in respect of which it has granted a licence under **section 59 [Grant of omnibus and country taxicab operator's licence]** notwithstanding that extension or variation has not been advertised in accordance with **section 59 [Procedure of transport regulator for public omnibus and country taxicab operator's licence]** if the national transport regulator is satisfied that the extension or variation is in the public interest and is of such a nature as not to affect adversely the interests of any other person providing transport facilities.

Temporary public omnibus operator's licence

65 (1) Where a demand exists to move passengers to and from places in the Partner State which are not linked by a licensed public operator's omnibus service, the national transport regulator may, on application, grant a temporary omnibus or country taxicab operator's licence in respect of a goods motor vehicle to be used as a temporary public omnibus or as a temporary contract omnibus.

(2) In granting to an applicant a temporary omnibus operator's licence under this section, the national transport regulator may relax any regulations relating to the construction of the body of an omnibus but may impose any other conditions as it sees fit.

(3) In dealing with an application for the renewal of a licence issued under this section, the national transport regulator shall consider whether, under all the circumstances then obtaining, the applicant should be required to regularize the type of vehicle he proposes to use on the service.

(4) Subject to the general directions of the national transport regulator, a public officer designated for any particular area by the Minister may, subject to such conditions as the officer may impose, issue a permit authorizing any person to carry a stated number of passengers on a goods vehicle for hire or reward, either at separate fares or at a single inclusive fare for the whole journey.

(5) The national transport regulator may, depending on the capacity of the vehicle, by regulations, specify the maximum number of passengers excluding the driver and the conductor permitted to be carried on a goods vehicle licensed under this section.

(6) A goods vehicle licensed under this section shall not be permitted to carry, at any one time, more than twenty-five persons excluding the driver and the conductor.

(7) Nothing in this section shall be taken to permit the carrying on any vehicle of a load exceeding the maximum permitted load of the vehicle.

Temporary licence

66 (1) Notwithstanding anything in this Act, the national transport regulator may, if it considers the immediate provision of a road service necessary for the convenience of the public, grant temporarily a public omnibus operator's licence in respect of that road service subject to such conditions as the national transport regulator considers necessary, for a period of three months, which may be extended for a further period not exceeding three months.

(2) Any licensee who fails to comply with any condition of a licence granted to him in accordance with this section commits an offence and is liable on conviction to a fine **not exceeding 200 currency units**.

(3) The national transport regulator may at any time revoke a licence granted under this section if the national transport regulator is satisfied that the licensee has failed to comply with any condition of his licence or of any provision of this Act or the regulations.

Application for goods vehicle operator's licence

67 (1) Any person who wishes to carry goods in a goods vehicle or omnibus for reward shall apply to the national transport regulator in the prescribed form accompanied by the prescribed fee for a goods operator's licence.

(2) An applicant for a goods operator's licence shall comply with any matters which may be prescribed and the application shall be accompanied by other forms or documents as may be prescribed.

Grant of goods vehicle

68 (1) Subject to this section, the national transport regulator may grant to an applicant a goods operator's licence to provide for such services as may be

operator's licence

specified in the licence.

(2) A goods operator's licence shall be for the duration of a licensing year and may be subject to such terms and conditions as the national transport regulator may think fit.

(3) The national transport regulator may not grant or renew a goods operator's licence to any applicant who-

(a) has been convicted of an offence involving fraud or dishonesty within two years before the date of his application;
(b) is in breach of a condition of his goods operator's licence;
(c) has had a public service operator's licence of any type held by him cancelled under this Act or any other enactment.

(4) A goods operator's licence shall not be transferable.

(5) The national transport regulator shall not issue a goods operator's licence under this Act unless it is satisfied that the motor vehicle to be used complies with the requirements of this Act and the regulations.

Application for town taxicab and rental vehicle operator's licence

69 (1) The owner of a motor vehicle who wishes to use that motor vehicle for the carriage of passengers for hire or reward within the city, municipality or town shall apply to the national transport regulator in the prescribed form accompanied by the prescribed fee for an operator's licence.

(2) The owner of a motor vehicle who wishes to hire out that motor vehicle for hire or reward on a daily, weekly or monthly basis shall apply to the national transport regulator in the prescribed manner accompanied by the prescribed fee for a rental vehicle operator's licence.

(3) An application for any class of licence under this section shall comply with any matters which may be prescribed and the application shall be accompanied by any other forms or documents as may be prescribed.

Town taxicab and rental vehicle operator's licence

70 A rental vehicle operator's licence shall authorize the holder of the licence to hire out the motor vehicles specified in the licence for hire or reward at an agreed rate or sum on a daily, weekly or monthly basis.

Grant of town taxicab, country taxicab and rental vehicle operator's licence

71 (1) Subject to this section, the national transport regulator may grant to any applicant an operator's licence of the class applied for under **section 69 [Application for town taxicab and rental vehicle operator's licence]** to provide such service as may be specified in the licence.

(2) In considering the grant of an operator's licence under this section, the national transport regulator shall have regard to-

(a) the needs of the public;
(b) the coordination, so far as possible, of all forms of passenger transport both in any particular area and in the whole of the Partner State;
(c) the reliability, character and financial stability of each applicant for a licence and the facilities at his disposal for the general maintenance of the service;
(d) the interests of any persons holding omnibus operator's licences over any route or routes or part of the route or routes or combination of routes or part of the routes, and of any persons who are providing transport facilities along or near the route or routes or combination of routes concerned.

(3) An operator's licence granted under this section shall be for the duration of a licensing year and may be subject to such terms and conditions as the national transport regulator may think fit.

(4) The national transport regulator may not grant or renew an operator's licence to any applicant who-

(a) has been convicted of an offence involving fraud or dishonesty within two years before the date of his application;
(b) is in breach of a condition of his operator's licence;
(c) has had a vehicle operator's licence of any type held by him cancelled under this Act or any other enactment.

(5) The national transport regulator shall not licence a town taxicab or rental motor vehicle under this Act, unless it is satisfied that the motor vehicle complies with the requirements of this Act and the regulations.

Grant of owner's transport vehicle permit

72 Any employer of labour may make an application to the national transport regulator in the prescribed manner and, on payment of the prescribed fee, may be granted a permit to be known as an owner's transport vehicle permit to carry his employees or agents on any goods vehicle owned by him to and from their places of work.

Renewal of certain vehicle operator's licence

73 (1) The holder of a vehicle operator's licence shall, if a change of circumstances affects the accuracy of his licence or if he wishes to have any particulars of his licence amended, apply to the national transport regulator in the prescribed manner for the amendment of his licence.

(2) In the case of an application for an amendment of an omnibus or country taxicab operator's licence, the national transport regulator shall, if it is of the opinion that the proposed amendment is of major importance, cause the application to be advertised and, not less than two months after an advertisement has been published, the national transport regulator shall meet to consider the application as if the application were for a new omnibus or country taxicab operator's licence.

(3) In all other cases, the national transport regulator may, in its discretion, grant the application and the applicant's licence shall be amended accordingly.

Amendment of licence

74 (1) The holder of a vehicle operator's licence shall, if a change of circumstances affects the accuracy of his licence or if he wishes to have any particulars of his licence amended, apply to the national transport regulator in the prescribed manner for the amendment of his licence.

(2) In the case of an application for an amendment of an omnibus or country taxicab operator's licence, the national transport regulator shall, if it is of the opinion that the proposed amendment is of major importance, cause the application to be advertised and, not less than two months after an advertisement has been published, the national transport regulator shall meet to consider the application as if the application were for a new omnibus or country taxicab operator's licence.

(3) In all other cases, the national transport regulator may, in its discretion, grant the application and the applicant's licence shall be amended accordingly.

Review of licences

75 (1) The national transport regulator may, if it is of the opinion that any vehicle operator's licence or any class of vehicle operator's licence should be reviewed, cause to be published in the national Gazette and in at least one newspaper circulating in Partner State a notice in the prescribed form of its intention to hold a meeting, which may be attended by the public.

(2) The national transport regulator shall at the same time serve a copy of the notice on the holders of the licences affected.

(3) The public may at the meeting make representations or objections to the review of the licence.

(4) Not less than one month after the date of publication of a notice under subsection (1), the national transport regulator shall meet and hear any representations, if any, from the holders of any licences affected and any other representations or objections to the review of the licence.

(5) The national transport regulator shall have regard to the same considerations as if it were considering a grant of a licence of the class affected and may, in its discretion, order the amendment of any licence or the cancellation of any licence so, however, that an amendment to or cancellation of any licence ordered under this section shall not have effect until the end of the licensing year in which the review is held.

Operator's vehicle licence

76 (1) The operator's vehicle licences shall be divided into the following classes-

(a) Class O-
  (i) public omnibus vehicle licence;
  (ii) contract omnibus vehicle licence;
  (iii) temporary public omnibus vehicle licence;
  (iv) temporary contract omnibus vehicle licence;
(b) Class G- goods vehicle licence;
(c) Class T – town taxicab vehicle licence;
(d) Class C – country taxicab vehicle licence;
(e) Class A – tourist agent vehicle licence; and
(f) Class R – rental vehicle licence.

(2) Any person who holds a vehicle operator's licence of a class specified in **section 55[Classification of vehicle operator's licence]**, or a renewal of a licence issued under **the national Tourism Act** shall, before commencing or renewing at the beginning of a licensing year any operations on the road authorized by the licence, apply to the national transport regulator in the prescribed manner for an operator's vehicle licence in respect of every vehicle he intends to use for any operations on the road specified in that licence.

(3) If the national transport regulator is satisfied that a motor vehicle is licensed under **Part III** of this Act and that it complies with regulations made under or for the purposes of **Part IV** and **Part V** of this Act, it may grant to any applicant an operator's vehicle licence in respect of that motor vehicle.

Cancellation of licence

77 (1) If the holder of a vehicle operator's licence-

(a) has been convicted of an offence involving fraud or dishonesty relating to the having of a vehicle operator's licence; or
(b) is in breach of a condition of his operator's licence,

his licence shall be cancelled by the national transport regulator.

(2) Subject to **section 60(1) [Public omnibus and country taxicab operator to**

give notice to the national transport regulator], the holder of a vehicle operator's licence may at any time surrender his licence to the national transport regulator for cancellation.

Alteration of records 78 (1) The national transport regulator shall, in any case where a vehicle operator's licence has been amended, renewed or cancelled, amend the registers accordingly.

(2) The national transport regulator may correct any clerical errors appearing in any register.

(3) Every correction or amendment to any register made under this section shall be initialled and dated by the chief licensing officer.

Goods vehicles to be licensed to carry passengers 79 (1) No person shall use a goods vehicle on a road for the carriage of passengers for hire or reward or of non-fare paying passengers or of goods except in accordance with the terms of a basic licence.

(2) Any person wishing to obtain a basic licence for the carriage of passengers for hire or reward or non-fare paying passengers or for goods may apply to the national transport regulator.

(3) An application for a basic licence shall be in the prescribed form, accompanied by the prescribed fee.

(4) A basic licence shall be issued in respect of one trip or more trips or generally.

(5) A basic licence shall be valid for one year and may be renewed.

Special licence 80 (1) Where a person wishes to use a goods vehicle to carry passengers for a special purpose, he may apply to a national police officer not below the rank of inspector at the nearest national police station.

(2) An application for any special licence shall be in the prescribed form, accompanied by the prescribed fee.

Conditions for issue of basic or special licence 81 (1) The national transport regulator shall issue a basic licence or, as the case may be, a national police officer referred to in **section 80 [Special licence]** shall issue a special licence only if satisfied that-

(a) the goods vehicle is registered;
(b) the particulars in the registration books are correct;
(c) the goods vehicle is insured against third party risks in accordance with the national Motor Vehicle Insurance (Third Party Risks) Act; and
(d) the road licence in respect of the goods vehicle has not been cancelled under **section 77 [Cancellation of licence]**.

(2) The insurance premium payable in respect of a goods vehicle shall be determined on the basis of the number of passengers or the maximum weight of goods authorized to be carried and on the period for which the insurance coverage is required and on the engine capacity of the vehicle.

Inspection of goods vehicle 82 Before issuing a licence to carry passengers or goods or both in respect of any goods vehicle, the national transport regulator shall require the applicant to produce an inspection report showing that the goods vehicle has been examined by an inspector of vehicles and that a certificate of fitness to carry passengers or goods has been issued in respect of the goods vehicle.

Refusal to register 83 The Registrar shall, where is of the opinion that the prescribed requirements for registration have not been complied with, refuse to register the driving licence

testing centre or activity and give reasons for the refusal.

PART VIII

LICENSING OF DRIVERS OF COMMERCIAL VEHICLES

Obligation of drivers of commercial vehicles to be licensed

84 (1) In order to establish that a driver of a commercial vehicle complies with his obligations, the authorities appointed under section 3 of this Act shall issue the driver with a certificate of professional competence, hereinafter referred to as the driver certificate of professional competence, certifying his initial qualification or periodic training.

(2) A person shall not drive a commercial vehicle unless he obtains in respect of such vehicle the relevant driver certificate of professional competence issued by the authorities appointed under section 3 of this Act.

(3) Professional bus, coach and lorry drivers shall hold a driver certificate of professional competence in addition to their driving licences.

(4) Any driver of lorries over 3,500 kilogrammes and minibuses with nine seats or more must obtain a driver certificate of professional competence.

(2) New drivers may obtain their driver certificate of professional competence by passing a series of initial qualification tests in theory and practical which shall be followed by 35 hours of periodic training every five years if they wish to keep their driver certificate of professional competence after that period.

(3) The driver certificate of professional competence shall be valid for five years.

(4) New drivers who have qualified via the initial qualification route may receive a driver qualification card which they can show as proof that they hold driver certificate of professional competence.

(5) Existing drivers may receive their driver qualification card when they have completed their 35 hours of periodic training.

(6) A person who drives a commercial vehicle without a relevant driver certificate of professional competence under subsection (1) of this section commits an offence and is liable on summary conviction to a fine not exceeding **350 currency units** or to a **term of imprisonment not exceeding 12 months** or to both such fine and imprisonment.

Approved centres to be allowed to provide professional defensive driving courses

85 (1) Only training centres which have been approved by the authorities appointed under section 3 of this Act shall be able to organize the training courses laid down for the initial qualification and periodic training.

(2) A driver who has completed a first course of periodic training shall undergo periodic training every five years, before the end of the period of validity of a certificate of professional competence certifying periodic training.

(3) Drivers for carriage of goods shall be trained on the ability to load the vehicle with due regard for safety rules and proper vehicle use in the following subjects-

(a) forces affecting vehicles in motion, use of gearbox ratios according to vehicle load ad road profile;
(b) calculation of payload of vehicle or assembly;
(c) calculation of total volume;

(d) load distribution;
(e) consequences of overloading the axle;
(f) vehicle stability and centre of gravity;
(g) types of packaging and pallets;
(h) main categories of goods needing securing;
(i) clamping and securing techniques;
(j) use of securing straps;
(k) checking of securing devices;
(l) use of handling equipment;
(m) placing and removal of tarpaulins;
(n) action on the event of failure;
(o) using ways of slowing down and braking on downhill stretches;
(p) others as may be prescribed in the regulations.

(4) Drivers for vehicles for carriage of passengers shall be trained on the ability to ensure passenger comfort and safety, ability to load the vehicle with due regard to safety rules and proper vehicle use, to know the regulations governing the carriage of passengers, ability to make drivers aware of the risks of the road and of accidents at work, ability to assess emergency situations in the following areas-

(a) carriage of specific groups of passengers;
(b) safety equipment on board buses;
(c) safety belts;
(d) vehicle load;
(e) adjusting longitudinal and sideways movements, road sharing;
(f) position on the road;
(g) smooth breaking;
(h) managing conflicts between safe driving and other roles as a driver, interacting with passengers, peculiarities of certain groups of passengers
(i) others as may be prescribed in the regulations.

(5) The training centres taking part in the initial qualification and periodic training shall apply for approval by the Registrar and the application shall be accompanied by documents including-

(a) a suitable qualification and training programme specifying the subjects taught and setting out the proposed implementing plan and teaching methods;
(b) the instructor's qualifications and field of activity;
(c) information about the premises where the courses are given, the teaching materials, the resources made available for the practical work, and the vehicle fleet used;
(d) the conditions regarding participation in the courses (number of participants).

(6) The authorities appointed under section 3 of this Act shall give approval in writing subject to the following conditions-

(a) the training must be given in accordance with the documents accompanying the application;
(b) the authorities appointed under section 3 of this Act must be entitled to send authorized persons to assist in the training courses of the approved centres, and must be entitled to monitor such centres, with regard to the resources used and the proper running of the training courses and tests;
(c) the approval may be withdrawn or suspended if the conditions are no longer complied with;
(d) the approved centre must guarantee that the instructors have a sound knowledge of the most recent regulations and training requirements;
(e) as part of a specific selection procedure, the instructors must provide

certification showing knowledge of both the subject material and teaching methods, certification of experience as professional drivers or similar driving experience.

Grant of driver certificate of professional competence, fitness as regards conduct

86 (1) The authorities appointed under section 3 of this Act shall not grant to an applicant a driver certificate of professional competence unless it is satisfied, having regard to the applicant's conduct, that the applicant is a fit and proper person to hold the driver certificate of professional competence.

(2) Where a question arises under subsection (1) of this section relating to the fitness of an applicant for a driver certificate of professional competence, having regard to the applicant's conduct, the authorities appointed under section 3 of this Act may require the applicant to furnish the authorities appointed under section 3 of this Act with such information as it may require and may by notice to the applicant require the applicant to attend before an officer of the authorities appointed under section 3 of this Act at the time and place specified by the authorities appointed under section 3 of this Act.

(3) Where the applicant fails without reasonable excuse to furnish information or to attend before or answer questions properly put by the officer when required to do so under subsection (2) of this section, the authorities appointed under section 3 of this Act shall refuse to grant the driver certificate of professional competence.

(4) Regulations shall prescribe what constitutes fitness for the purposes of this section.

Registration and licensing of commercial motorcycles and drivers of commercial motorcycles

87 (1) A person shall not operate as a commercial motorcycle rider unless-

(a) the motorcycle is registered for the purpose; and
(b) he has in that regard a rider certificate of professional competence issued by the Registrar.

(2) Sections 86 **[Grant of driver certificate of professional competence; fitness as regards conduct] and 77 [Revocation or suspension of driver certificate of professional competence], 89 [Disqualification on revocation of driver certificate of professional competence], 90[Surrender, return and endorsement of revoked or suspended driver certificate of professional competence] and 92 [Appeals to court]** shall, with the necessary modifications, apply to a licence to operate as a commercial motorcycle rider.

(3) Any person operating as a commercial motorcycle rider in contravention of subsection (1) commits an offence and is liable on summary conviction to a fine **not exceeding 70 currency units**.

Revocation or suspension of driver certificate of professional competence

88 (1) A driver certificate of professional competence issued under **subsection (1)** of **Section 86[Grant of driver certificate of professional competence; fitness as regards conduct]** shall be revoked or suspended if the holder's conduct is such as to make the holder unfit to hold that driver certificate of professional competence.

(2) Where the driver certificate of professional competence is suspended under subsection (1) of this section it shall during the time of suspension be of no effect.

Disqualification on revocation of driver certificate of

89 (1) Where the authorities appointed under section 3 of this Act revoke a commercial vehicle driver's driver certificate of professional competence, the authorities appointed under section 3 of this Act may-

professional competence

(a) disqualify the holder indefinitely or for such period as the authorities appointed under section 3 of this Act think fit;

(b) except where the licence is a learner's permit, if it appears to the authorities appointed under section 3 of this Act that, owing to the conduct of the holder of the licence, it is expedient to do so, may require the holder to comply with the prescribed conditions applicable to learner's permits under this Act until the holder passes the prescribed test of competence to drive commercial vehicles of any class.

(2) If, while the holder of a commercial vehicle driver's driver certificate of professional competence is disqualified under subsection (1) of this section, the circumstances prescribed cease to exist in the case of the driver, the authorities appointed under section 3 of this Act shall on an application made by the driver for purpose, remove the disqualification.

(3) Where the holder of a driver certificate of professional competence is disqualified under paragraph (b) of subsection (1) of this section, the authorities appointed under section 3 of this Act shall not afterwards grant a driver certificate of professional competence to drive a commercial vehicle of any class unless it is satisfied that, that person has since the disqualification passed the prescribed test of competence to drive motor vehicles of that class, and until the person passes that test, any driver certificate of professional competence obtained by such person is of no effect.

(4) Where the disqualification of the holder of a large cargo vehicle or passenger-carrying vehicle driver certificate of professional competence continues in force, a commercial vehicle driver certificate of professional competence shall not be granted to that person and any such driver certificate of professional competence obtained by that person is of no effect.

Surrender, return and endorsement of revoked or suspended driver certificate of professional competence

90 (1) Where the authorities appointed under section 3 of this Act revoke or suspend a driver certificate of professional competence, the authorities appointed under section 3 of this Act shall serve notice on the holder of the driver certificate of professional competence requiring the holder to deliver the driver certificate of professional competence immediately to the authorities appointed under section 3 of this Act, and the holder of the driver certificate of professional competence shall comply with the requirement

(2) A holder of a driver certificate of professional competence who fails without reasonable excuse to comply with the request under subsection (1) of this section commits an offence and is liable on summary conviction to a fine **not exceeding 70 currency units** or **imprisonment for a term not exceeding 12 months**.

(3) On the delivery of the driver certificate of professional competence by the holder to the authorities appointed under section 3 of this Act under subsection (1) of this section, the authorities appointed under section 3 of this Act -

(a) shall in the case of a revoked driver certificate of professional competence, issue to the driver, on payment of the prescribed fee, a certificate authorizing the driving of the class of motor vehicles which are unaffected by the revocation; or
(b) shall in the case of a suspended driver certificate of professional competence, endorse the licence with particulars of the suspension and return the licence to the holder.

Exemption from driver certificate of competence requirements

91 Notwithstanding the provisions of **section 84 [Obligation of drivers of commercial vehicles to be licensed]** a driver certificate of professional competence may not be required if the vehicle driven-

(a) has a maximum authorized speed not exceeding 50 kilometres per hour;
(b) is used by, or under the control of, the armed forces, civil defence, the fire service and forces responsible for maintaining public order;
(c) is undergoing road tests for technical development, repair or maintenance purposes, or is a new or rebuilt vehicle which has not yet been put in service;
(d) is used in emergency or assigned to rescue missions;
(e) is used in the course of driving lessons for any person wishing to obtain a driving licence or a driver certificate of professional competence;
(f) is used for non-commercial carriage of passengers or goods, for personal use;
(g) is carrying material or equipment to be used by the driver in the course of his work, provided that driving the vehicle is not the driver's principal activity.

Appeals to court

92 (1) A person who, being the holder of; or an applicant for, a commercial vehicle driver certificate of professional competence, is aggrieved by the authorities appointed under section 3 of this Act's-

(a) refusal or failure to grant such a driver certificate of professional competence;
(b) suspension or revocation of such a driver certificate of professional competence; or
(c) ordering of disqualification;

may appeal to a court of competent jurisdiction after giving to the authorities appointed under section 3 of this Act notice of an intention to do so.

(2) On an appeal under subsection (1) of this section, the court may make such order as it thinks fit taking into consideration public safety and the order shall be binding on the authorities appointed under section 3 of this Act and the appellant.

PART IX

ENFORCEMENT AND INSTITUTION OF PROCEEDINGS

(a) Enforcement

Examination of vehicle on road

93 Any police officer may stop and examine any motor vehicle or trailer on a road or public place if he is of the opinion that such motor vehicle or trailer-

(a) is in such condition as to be unfit for the purpose of which it is intended; or

(b) is in such a condition that the driving of the motor vehicle or trailer by day or by night is likely to be a danger to any person or to the public; or

(c) has a load greater than the load capacity declared by the manufacturers of the chassis of the motor vehicle or trailer or greater than the load capacity determined by a vehicle inspector under the provisions of this Act, or

(d) is loaded in such a manner as to make it a danger to the public or any person,

and when the examination reveals that such motor vehicle or trailer is unfit or a danger to any person or that it has a load greater than the load declared by the manufacturer of the chassis of the vehicle or determined by a vehicle inspector he may-

(i) if he considers it sufficiently safe, taking all the relevant facts into consideration for the motor vehicle or trailer to be moved under its own motive power, order that it be driven forthwith to the nearest police station or workplace of a vehicle inspector, whichever is the more convenient; or

(ii) if he considers that the motor vehicle or trailer is overloaded or that it is not safely loaded, order the motor vehicle or trailer to be driven forthwith to the nearest weight bridge and weighed or order the load to be made safe before the motor vehicle or trailer is moved; or

(iii) if he considers it unsafe for the motor vehicle or trailer to be driven under its own motive power, order that the motor vehicle or trailer be towed forthwith to the nearest police station or workplace of a vehicle inspector whichever is the more convenient.

Removal of abandoned vehicle

94 (1) Any police officer may take possession of and remove any vehicle or trailer which is on a road or road reserve if it appears to him that the vehicle or trailer has been abandoned by the owner and has not been moved from such road or road reserve for more than three consecutive days.

(2) If any vehicle or trailer so removed is not claimed and the expenses of removal and storage thereof not paid by the owner or some other person having an interest therein within two months of the date of removal, the authorities appointed under section 3 of this Act may cause a notice of their intention to sell by auction the vehicle or trailer to be published in the *Gazette* and in at least two newspapers of wide circulation and, ay any time thereafter, the vehicle or trailer may be sold by auction and disposed of to any person who shall thereupon, become the lawful owner of the vehicle or trailer, as the case may be.

(3) The proceeds of a sale under subsection (2) of this section shall be applied in payment of the costs and charges attending the sale, including the cost of advertisement and of the expenses of the removal and storage of the vehicle or trailer and the residue, if any, shall be payable to the former owner of the vehicle or trailer or, where the former owner fails to claim the residue within six months of the sale, the residue shall be forfeited to the Partner State in whose jurisdiction the motor vehicle has been abandoned.

Removal of broken down vehicle, etc

95 (1) It shall be the duty of the owner and of the driver or of any other person in control or in charge of a broken-down vehicle or trailer on any road to remove or take all reasonable steps to secure the removal of such vehicle or trailer as soon as practicable form the road.

(2) A police officer, if he is of the opinion-

(a) that the owner or driver or other person in control or in charge of a broken-down vehicle on any road has failed to take any necessary steps to remove the vehicle or to cause it to be removed in accordance with the provisions of subsection (1) of this section; or
(b) that the vehicle constitutes a danger to traffic,

may forthwith remove the vehicle or use the services of any other person or persons to remove the vehicle in such manner and to such place as he may think fit; and for this purpose may provide and use any plant or apparatus and

take all other steps which he may consider necessary.

(3) When a police officer removes any broken-down vehicle or trailer or uses the services of any other person or persons to remove the vehicle or trailer in accordance with the provisions of subsection (2) of this section-

(a) the expenses of an incidental to such removal shall be recoverable summarily as a civil debt from the owner thereof;
(b) except upon proof of failure to exercise reasonable care, neither the police officer nor any person whose services are used by him as provided for in this section shall be liable to any action or demand whatsoever for any damage to the broken-down vehicle or trailer or otherwise in respect of the removal thereof.

(4) Any person who, without reasonable excuse, acts in contravention of or fails to carry out his duty under the provisions of subsection (1) of this section commits an offence and shall be liable on conviction to a fine not exceeding **500 currency units.**

(5) For the purposes of this section "broken-down vehicle or trailer" means any vehicle or trailer, whether mechanically propelled or drawn by any draught-animal which, from any cause whatsoever, has become incapable of movement by its motive-power or by the draught-animal, as the case may be.

Police may require motor vehicle to be driven to police station and detain the vehicle

96 A police officer may, after stopping any motor vehicle or trailer which he reasonably suspects of being, or of having been, used or involved in the commission of an offence, whether under this Act or any other written law, order the driver thereof to drive it to the nearest convenient police station in order that-

(a) particulars may be taken of the motor vehicle or trailer and its registration;

(b) the names and addresses of the driver, owner and any passenger may be obtained;

(c) the details of the place at which each passenger entered the motor vehicle and his destination may be obtained;

(d) statements relevant to the suspected offence may be obtained,

and such vehicle may be detained until all necessary inquiries have been made in relation to the case.

Power to stop, inspect and detain vehicle

97 (1) A police officer, a member of the licensing authority or any administrative officer may search any vehicle, and for this purpose may stop such vehicle or trailer, if in motion, with a view to ascertain whether or not the provisions of this Act or of any regulations made hereunder are being complied with, and may demand for inspection, the production of any licence, certificate, document or record of any description whatsoever which may, under the provisions of this Act or of any regulations made hereunder, be required to be carried on such vehicle or trailer, and may require the driver or any other person travelling on such vehicle to give such information as such police officer, member or administrative officer may reasonably request in order to ascertain whether or not the provisions of this Act or regulations are being complied with.

(2) Any person who obstructs any police officer, member or administrative officer in the exercise of the powers conferred by this section, or fails to comply with any lawful order given by such police officer, member or administrative officer, or refuses to give any information when requested so to do by such police officer, member or administrative officer shall be guilty of an offence and shall be liable to a fine of **500 currency units or to imprisonment for one year or to both such fine and such imprisonment.**

(3) Any police officer of or above the rank of Assistant Superintendent or any officer in charge of police station having reasonable grounds for believing that any person has committed an offence against this Act and that such person will not attend the court and answer to any process which may be issued against him, may arrest such person without a warrant.

(4) Where any police officer of or above the rank of Assistant Superintendent or any officer in charge of police has reasonable grounds for believing that any vehicle which is registered outside Tanzania is being used in contravention of the provisions of this Act he may take such vehicle into his custody and for this purpose may, if it is in motion, stop such vehicle.

(5) Where a vehicle is taken into custody under subsection (4) of this section it may be detained at a police station or other place of safety until inquiries to ascertain whether the vehicle was being used in contravention of this Act have been completed and until the identity of the person who is the user of the vehicle within the meaning of this Act has been established, and in the event of proceedings being instituted against such person for a contravention of any provision of this Act the vehicle may be further detained until his conviction, acquittal or discharge in such proceedings.

(b) Institution of proceedings

Institution of traffic proceedings

98 (1) Traffic proceedings may be instituted-

(a) in the manner provided by the Criminal Procedure law of a Partner State; or

(b) by the completion, service and filing of a traffic charge and summons in the manner hereinafter provided.

(2) A traffic charge and summons shall be in the form set out in the **Second Schedule** to this Act

(3) The national Chief Justice may, by rules, amend, vary or replace the form

referred to in subsection (2) of this section.

Charge and summons

99 (1) Where a police officer has reasonable cause to suspect that any person has contravened any of the provisions of this Act or of the regulations, he may forthwith complete and serve upon such person a traffic charge and summons containing the particulars referred to in section **98 [Institution of traffic proceedings]** of this Act.

(2) Where a traffic charge and summons has been served upon any person, a copy thereof shall be lodged forthwith with the court specified therein.

(3) A person upon whom a traffic charge and summons has been served shall attend the sitting of the court specified in such traffic charge and summons and the court shall then proceed to hear and determine the matter in accordance with the provisions of the Criminal Procedure law of a Partner State.

(4) Where in any traffic proceedings, any person to whom subsection (3) of this section applies fails to appear before the court at the time and place specified in the traffic charge and summons, the court shall, notwithstanding the provisions of any written law-

(a) proceed to hear and determine the charge in his absence and may, if the court finds the accused guilty of the charge impose such fine as the court may think fit not exceeding the maximum fine prescribed in respect of such offence; or

(b) in any case where in the opinion of the court the offence with which the accused is charged is of a serious nature and may justify a sentence of imprisonment at whatever stage of the trial such opinion is formed, issue a warrant for the arrest of such person:

Provided that upon appearance of the accused before the court pursuant to a warrant issued under paragraph (b) or otherwise, the accused shall not be entitled, as of right, to have the proceedings commence *de novo* or to have any witness recalled for cross-examination.

Application of Criminal Procedure Act

100 Subject to **section 99 [Charge and summons]**, the provisions of the Criminal Procedure law of a Partner State other than the provisions relating to the mode of institution of proceedings or the presence of the accused during trial or sentence shall apply *mutatis mutandis*, to proceedings on traffic summons and charges issued under the provisions of this Part.

Admissibility of certificates

101 A copy of any certificate of fitness purporting to be issued by a vehicle inspector to the effect that he has examined a motor vehicle or trailer and as to the result of such examination shall, if certified by the Registrar, be *prima facie* evidence in any court proceedings of the facts contained therein:

Provided that the court may, if it thinks fit, summon and examine the vehicle inspector as to the subject matter of his certificate.

PART X

MISCELLANEOUS PROVISIONS

Motor omnibus to carry conductor

102 (1) No person shall drive or act as a conductor of a public service vehicle on a road unless he holds a vocational licence granted under this Part for those purposes, and nor registered owner of a public service vehicle or other person shall employ or permit any person who is not licensed to drive or act as a conductor of a public service vehicle while it is being used for the carriage of passengers for hire or reward on a road.

(2) The owner of any motor omnibus used in contravention of the provisions of this section shall be guilty of an offence.

Conductor's licence

103 (1) No person shall act as a conductor of a motor omnibus unless he is licensed for the purpose, and no person shall employ as a conductor any person who is not so licensed.

(2) Any person who acts in contravention of the provisions of this section shall be guilty of an offence.

Application for conductor's licence

104 (1) Any person who desires to be licensed as a conductor of a motor omnibus shall apply to the **national transport regulator** in the prescribed form and shall be registered if in the opinion of the authorities appointed under section 3 of this Act, he is a fit and proper person to be registered.

(2) A conductor's licence shall be in such form as may be prescribed and shall be issued by the **national transport regulator** on payment to them of the prescribed fee and upon their being satisfied that the provisions of any regulations made under this Act have been complied with.

(3) A person shall not serve as a conductor or apprentice on a commercial vehicle unless he is 18 years or above and is registered for that purpose by the **national transport regulator**.

(4) After registration, the **national transport regulator** shall, upon the payment by the applicant of such fees as the **national transport regulator** may prescribe, issue to the applicant an identification badge to be worn by him while on duty as a conductor or apprentice.

(5) Any person who serves as a conductor or apprentice-

(a) in contravention of subsection (1) of this section; or

(b) without wearing the identification badge referred to in subsection (4) of this section;

commits an offence and shall be liable on summary conviction to a fine **not exceeding 20 currency units** or to a term of **imprisonment not exceeding 3 months** or to both.

Particulars of conductor's licence

105 Upon issuing a conductor's licence the **national transport regulator** shall enter in the appropriate register the particulars of the licence including the name, address and description of the person licensed, the date of the licence and any convictions ordered by competent court to be endorsed thereon.

Duration of conductor's licence

106 A conductor's licence shall, unless previously cancelled or suspended by the **national transport regulator**, expire upon the 31st day of December next following the date of issue.

Renewal of conductor's licence

107 On or after the expiration of a conductor's licence by effluxion of time and on application by the holder thereof for the renewal of his licence, the **national transport regulator** shall, on payment of the prescribe fee, renew the licence.

Cancellation

108 (1) The **national transport regulator** may at any time cancel, revoke or suspend the licence of any conductor on the ground that by reason of his

and suspension of conductor's licence

conduct or physical disability, the holder is not a fit and proper person to hold such a licence or on his being convicted of an offence under this Act or for any contravention of the provisions of this Act or of any regulations made there under.

(2) Where the **national transport regulator** refuses to grant or suspends, revokes or cancels a vocational licence, the applicant or licence holder may appeal to the **national transport regulator** for administrative review, and on such appeal the **national transport regulator**, after such enquiry if any as it thinks necessary, may make such revision as it deems fit.

Tickets and fares system

109 (1) Any person authorized to receive fares from passengers or intending passengers in a public service vehicle other than a hire car or taxicab shall forthwith issue to each passenger or intending passenger who has paid his fare a ticket showing the amount of such fare and such other particulars as may be prescribed.

(2) Any passenger in a public service vehicle who has paid a fare may, if the vehicle fails to start its journey from its terminal point within six hours of the time approved in its time-table, or if the operator fails to convey the passenger to such passenger's destination within a reasonable time, recover the whole fare paid by such passenger.

(3) Where a fare is recoverable under subsection (2) of this section the person who received the fare or the person on whose behalf the fare was received if it has been handed over to that person shall repay it to the passenger on demand.

(4) If any person who has a duty to repay a passenger fare under subsection (3) of this section fails to repay the fare that person commits an offence and a court may, on conviction, order that person to repay the fare, in addition to any other fine to which that person may be liable, and the amount of the fare shall be recovered as a fine, and imprisonment may be imposed in default of payment.

(5) Nothing in this section shall affect any civil remedy for the recovery of the fare or any part thereof, which may be recoverable under this section.

(6) Any owner or person in control of a public service vehicle used for the carriage of passengers shall, in respect of every long distance journey, cause to be displayed, in a conspicuous place inside the public service vehicle concerned, a list of passengers on board the public service vehicle during the course of the journey.

(7) The owner or person in control of a public service vehicle shall cause a copy of the list referred to in subsection (6) of this section to be retained at the principal place of business.

(8) Any person who contravenes subsection (6) of this section commits an offence and is liable on conviction, in case of a first offence to a fine **not exceeding 500 currency units** or to **imprisonment for a period not exceeding eighteen months**, or to both, and in the case of a second or subsequent offence to a fine **not exceeding 1,000 currency units** or to **imprisonment for a period not exceeding two years** or to both.

(9) For the purposes of subsection (6) of this section, "long distance journey" means a journey covering a distance of two hundred kilometres or more from the point of commencing the journey to the final destination.

Recovery of fares by transport operator and wilful damage to public service vehicle by passenger

110 (1) Any person who-

(a) fails to pay any sum due from him for accommodation in a public service vehicle, when plying for hire, on demand made by the owner of the motor vehicle or by the person authorized by the owner to receive that sum; or

(b) wilfully damages any public service vehicle,

commits an offence and is liable on conviction to a **fine of not less than twice the fare and not exceeding 200 currency units**.

(2) Upon any conviction for an offence under subsection (1) of this section, the court, instead of or in addition to the imposition of a fine, may make an order for the payment by the offender of a sum by way of damages or of any sum due by the offender, and may further, if he thinks fit, award costs and compensation against the offender in respect of any loss of time incurred by the owner, driver or conductor of the public service vehicle in attending the court.

(3) A police officer in uniform may arrest without warrant any person who commits an offence under this section unless that person gives to that officer his name and address and satisfies the police officer that he will duly answer any summons or other proceedings which may be taken against him.

Recovery of fares by passenger

111 (1) Where, at any place on its route, a public service vehicle is more than one hour late owing to a breakdown or any fault or neglect of the owner, his servants or agents, any passenger who has paid his fare may elect to alight from the public service vehicle and recover the full fare paid by him.

(2) Where a fare is recoverable under subsection (1) of this section, it shall be the duty of the person who received the fare to repay it to the passenger on demand or provide an alternative public service vehicle or other suitable vehicle for the passenger to enable him to reach his destination.

(3) Any person liable to repay a fare under this section who fails to repay that fare commits an offence and is liable on conviction to a **fine of not less than 50 currency units and not exceeding 100 currency units in addition to being ordered to repay the fare**, and the amount of the fare shall be recoverable as a fine.

Importuning passenger or prohibition of touting

112 (1) No owner, driver or conductor, or person acting on behalf of the owner, driver, or conductor of a public service vehicle plying for hire or authorized to carry passengers shall make any noise or sound any instrument in order to attract the attention of the public or of a possible passenger, or by troublesome or frequent demands or by persistent following, hold out the vehicle for hire to the public, or attempt to induce any person to become a passenger of the vehicle in such a manner as to constitute a nuisance, or act in any way so as to cause annoyance or inconvenience to any person.

(2) Any person who contravenes subsection (1) of this section commits an offence and is liable on conviction to a fine of **not less than 50 currency units** and **not exceeding 300 currency units** or to **imprisonment for a term not exceeding six months** or to both.

General penalty

113 A person who commits an offence under this Act for which a penalty has not been prescribed is liable to summary conviction to a fine not less than **50**

currency units and not exceeding **250 currency units** or to a term of imprisonment not exceeding 12 months or to both and for a second or subsequent offence to a further fine not less than **100 currency units** and not exceeding **500 currency units** or to a term of imprisonment not less than 6 months and not exceeding 12 months or to both

General regulations

114 The Council of Ministers may make regulations for the better carrying into effect of the provisions and purposes of this Act and in particular but without prejudice to the generality of the foregoing, make regulations-

(a) providing for the re-issue of a trade licence in place of a licence which is or may be lost, stolen, destroyed or damaged;
(b) providing for the fee to be paid on re-issue of the licence;
(c) prescribing the details of the procedure for registration, the particulars to be included in the application and the registration fees to be charged;
(d) prescribing the form and particulars of the motor vehicle registration certificates;
(e) prescribing the distinguishing marks of the Partner States to be fixed on motor vehicles as identification marks for the Partner State in which the motor vehicle is registered;
(f) requiring the identification mark assigned to a motor vehicle to be fixed in a prescribed manner to the motor vehicle, and prescribe the size, the shape, colour and the character of the identification mark to be fixed on any motor vehicle;
(g) prescribing the conditions subject to which trader licences or trade licence plates are to be issued, and any other matter or thing that needs to be prescribed for the purposes of registration of trade licences;
(h) altering or adding to the conditions of which the Registrar is required by this Act to be satisfied for the entry of a name in the register, for retention of a name in the register, for the removal of a name from the register or omission of any of those conditions;
(i) prescribing the testing of motor vehicles to be used under a vehicle operator's licence and the application for the form of the licence and the conditions relating to the grant of an operator's vehicle licence for such motor vehicles;
(j) prescribing matters in relation to the design, construction, equipment, condition and inspection of motor vehicles that may be used under a vehicle operator's licence;
(k) providing for and regulating the issue, duration, conditions and revocation of certificates of fitness for motor vehicles that may be used under a vehicle operator's licence and generally prescribing the conditions upon or subject to which they may be used and regulating the use of the certificates;
(l) prescribing the documents, plates and marks and signs to be carried by or shown on vehicles to be used under a vehicle operator's licence and the manner in which they are to be carried and providing for and regulating the issue, duration, conditions, revocation and replacement of those documents, plates and marks;
(m) regulating the carriage of passengers, passengers' luggage and of goods in motor vehicles used under a vehicle operator's licence and the claiming of lost luggage and goods;
(n) prescribing any matters that may be necessary with respect to taxicab stands and other places of hiring taxicabs and telephones for use in connection with them and with respect to the hiring of taxicabs;
(o) prescribing anything to be prescribed under this Act.

Act to have overriding effect

115 Whenever the provisions of this Act or of any regulations or rules made there under are in conflict with the provisions of any other Act relating to the registration and licensing of a Partner State of motor vehicles, the provisions of

this Act and the regulations made there under shall prevail.

Repeals and savings

116 (1) The repeal or ineffectiveness of any legislation in relation to the matters specified under **section 115 [Act to have overriding effect]** of this Act shall not affect the validity of any notice, direction, licence, permit, certificate or authority issued or granted under those enactments and which are valid immediately before the commencement of this Act and any such notice, direction, licence, permit or certificate shall have effect as if granted under the corresponding provision of this Act.

(2) Any authority established under the repealed or ineffective Acts, of the Partner States having power to grant licences, permits, certificates or authority in respect of drivers, commercial vehicles, motor vehicles and others and existing immediately before the date of commencement of this Act, Part of this Act or provisions of this Act, as the case may be, shall continue to remain in existence and shall exercise all such functions conferred on such authority constituted under the repealed or ineffective Acts until there is established the relevant authorities under Part II of this Act.

(3) Nothing in those Acts shall affect the enactments so repealed in their operation to offences committed or proceedings commenced before the repeal.

(4) Notwithstanding the repeals effected by subsection (1) of this section, any rules or regulations under the Acts thereby repealed and in force immediately before the commencement of this Act shall continue in force until revoked under this Act.

FIRST SCHEDULE

(Made under Section ….)

Currency point

A currency point is equivalent to:

(a) in the case of an offence committed in the Republic of Burundi, ……..Burundi Francs;

(b) in case of an offence committed in the Republic of Kenya, …….Kenya Shillings;

(c) in case of an offence committed in the Republic of Uganda, twenty thousand (20,000) Uganda Shillings;

(d) in case of an offence committed in the United Republic of Tanzania, ……..Tanzania Shillings;

(e) in case of an offence committed in the Republic of Rwanda, ……Rwanda Francs; and

(f) in the case of an offence committed in a future new Partner State, to be determined

SECONDSCHEDULE

(Made under Section ….)

TRAFFIC CHARGES AND SUMMONS

THE PARTNER STATE OF …….

THE EAST AFRICAN COMMUNITY MOTOR VEHICLE REGISTRATION AND LICENSING ACT 201…..

In the Magistrate's Court of …….. at ……..

Criminal Case (Traffic) No …… of ……..20…..

Vehicle Registration No ……

To:
……
……(accused)

SUMMONS

Your attendance is necessary to answer to the charge / charges set out hereunder and you are hereby commanded to appear without fail in the Magistrate's Court of …… at ……. on the ……..day of ……20……at ……. a.m./p.m. or as soon thereafter as the case can be heard.

Dated this ……..day of ……..20…….

……

Magistrate

CHARGE

……
……
……
……
……

Traffic Summons and Charge received

……..

(Name and Signature of Accused)

Affidavit of Service of Traffic Charges and Summons

The Road Transport and Safety Act

I, ……

(Name and rank)

Make oath and say as follows-

(1) That I, being a person duly authorized to issue a charge and summons under the East African Community Motor Vehicle Registration and Licensing Act 201….., did on the ……day of ……, 20…. serve the accused with a copy of this charge and summons by delivering the copy personally to him/her.
(2) That I advised him/her that a written plea of guilty may/would not be accepted instead of his/her attendance.

Sworn before me this on the …….day of ……..20…..

……

Magistrate

APPENDIX 2

DRAFT EAST AFRICAN COMMUNITY MOTOR VEHICLE REGISTRATION AND LICENSING OF MOTOR VEHICLES ACT

REFERENCE LAW, OBJECTS AND REASONS

DAR ES SALAAM

2012-10-20

PART I

PRELIMINARY PROVISIONS[1]

Section *Title*

117. Short title, application and commencement

Corresponding Law:- Section 1 corresponds to section 1of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 1 seeks to provide for "short title, application and commencement" of the proposed legislation.

118. Interpretation

Corresponding Law:- Section 2 corresponds to section 2(1) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[2].

Objects and reasons:- Section 2 seeks to provide for definitions of certain terms and expressions which have been used in the proposed legislation.

(a) "articulated vehicle"

Corresponding Law:- This definition does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[3]. It is a new definition.

(b) "axle"

Corresponding Law:- This definition does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002. It is a new definition.

(c) "carriage of goods"

[1] This Part corresponds to the Tanzania Road Traffic Act, Cap 168 R. E. 2002; the Kenya Traffic Act, Cap 403 Revised 2009; the Uganda Traffic and Road Safety Act, 1998 (Cap 361)

[2] This section also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361)

[3] This definition also corresponds to the definition given under section 2(1) of the Uganda Traffic and Road Safety Act, 1998 (Cap 361)

Corresponding Law:- This definition does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002. However, section 3(1) of the Tanzania Transport Licensing Act, 1973 (Act No 1) defines this expression.

(d) "certificate of roadworthiness"

Corresponding Law:- This definition does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002. It is a new definition.

(e) "class"

Corresponding Law: - This definition dose not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002. It is a new definition.

(f) "commercial vehicle"

Corresponding Law: - This definition corresponds to section 2(1) (f) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[4].

(g) "Council"

Corresponding Law:- This definition does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002. It is a new definition.

(h) "dealer"

Corresponding Law:- This definition corresponds to section 2(1)(i) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[5].

(i) "driver"

[4] This definition also corresponds to section 2 of the Kenya Traffic Act, Cap 403 Revised 2009

[5] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361)

Corresponding Law:- This definition corresponds to section 2(1)(j) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[6].

(j) "engineering plant"

Corresponding Law:- This definition corresponds to section 2(1)(m) of the of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[7].

(k) "fare"

Corresponding Law:- This definition does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002. However, section 3(1) of the Tanzania Transport Licensing Act, 1973 defines this term.

(l) "goods vehicle"

Corresponding Law:- This definition corresponds to section 2(1)(p) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002. In addition, section 3(1) of the Tanzania Transport Licensing Act, 1973 defines this term

(m) "heavy goods vehicle"

Corresponding Law:- This definition does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002. It is a new definition.

(n) "heavy omnibus"

Corresponding Law:- This definition does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002. It is a new definition.

(o) "inspection centre"

[6] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361)

[7] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361)

Corresponding Law:- This definition does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002. It is a new definition.

(p) "inspector general of police"

Corresponding Law:- This definition does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002. It is a new definition.

(q) "licensing officer"

Corresponding Law:- This definition does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[8].

(r) "manufacturer"

Corresponding Law:- This definition does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[9].

(s) "motor car"

Corresponding Law:- This definition does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[10].

(t) "motor cycle"

Corresponding Law:- This definition corresponds to section 2(1)(aa) of the Road Traffic Act, Cap 168 R. E. 2002.[11]

(u) "motor omnibus"

[8] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361)
[9] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361)
[10] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361)
[11] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361)

Corresponding Law:- This definition does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[12].

(v) "motor vehicle"

Corresponding Law:- This definition corresponds to section 2(1)(bb) of the Road Traffic Act, Cap 168 R. E. 2002.

(w) "owner"

Corresponding Law:- This definition corresponds to section (dd) of the Road Traffic Act, Cap 168 R. E. 2002.

(x) "owner's transport vehicle"

Corresponding Law:- This definition does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002.

(y) "Partner States"

Corresponding Law:- This definition corresponds to section 2(1)(ff) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

(z) "passenger"

Corresponding Law:- This definition does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002. It is a new definition.

(aa) "passenger transport service"

Corresponding Law:- This definition does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002. It is a new definition.

[12] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009

(bb) "passenger vehicle"

Corresponding Law:- This definition corresponds to section 2(1)(gg) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

(cc) "plying for hire"

Corresponding Law:- This definition corresponds to section 2(1)(ii) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

(dd) "prescribed"

Corresponding Law:- This definition corresponds to section 2(1)(kk) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

(ee) "public omnibus"

Corresponding Law:- This definition corresponds to section 2(1)(nn) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

(ff) "public service vehicle"

Corresponding Law:- This definition corresponds to section 2(1)(oo) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[13]. Section 3(1) of the Tanzania Transport Licensing Act, 1973 makes provision for the definition of these expressions

(gg) "register"

Corresponding Law:- This definition corresponds to section 2(1)(pp) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[14].

[13] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361)
[14] This definition also corresponds to section 2 of the Uganda Traffic and Road Safety Act, 1998 (Cap 361)

(hh) "Registrar"

Corresponding Law:- This definition corresponds to section 2(1)(qq) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

(ii) "rental vehicle"

Corresponding Law:- This definition corresponds to section 2(1)(rr) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[15].

(jj) "road"

Corresponding Law:- This definition corresponds to section 2(1)(ss) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002. . In addition, section 3(1) of the Tanzania Transport Licensing Act, 1973 defines this term[16].

(kk) "tare weight"

Corresponding Law:- This definition does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[17].

(ll) "taxicab"

Corresponding Law:- This definition corresponds to section 2(1)(uu) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[18]

(mm) "trailer"

Corresponding Law:- This definition corresponds to section 2(1)(xx) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002. In addition, section 3(1) of the Tanzania Transport and Licensing Act, 1973 makes provision for this definition[19].

[15] This definition also corresponds to section 2 of the Uganda Traffic and Road Safety Act, 1998 (Cap 361)
[16] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361)
[17] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009
[18] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009

(nn) "transport service licence"

Corresponding Law:- This definition does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002. It is a new definition.

(oo) "Treaty"

Corresponding Law:- This definition does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

(pp) "unladen weight"

Corresponding Law:- This definition corresponds to section 2(1)(yy) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

(qq) "vehicle"

Corresponding Law:- This definition corresponds to section 2(1)(zz) of the Road Traffic Act, Cap 168 R. E. 2002[20].

PART II

ADMINISTRATIVE PROVISIONS

119. Registrar of motor vehicles

Corresponding Law:- Section 3 corresponds to section 3 of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[21].

[19] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361)
[20] This definition also corresponds to sections 2 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361)

Objects and reasons:- Section 3 empowers the national Minister to appoint a public officer to act as the national Registrar of motor vehicles and trailers

120. Other officers

Corresponding Law:- Section 4 corresponds to section 4 of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[22].

Objects and reasons:- Section 4 empowers the national Minister to appoint other officers to enable the better carrying out of the provisions of the Act.

121. Registers

Corresponding Law:- Section 5 corresponds to section 5.of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[23].

Objects and reasons:- Section 5 compels the Registrar of motor vehicles to keep in the prescribed form registers of all motor vehicles and trailers registered under this Act and to keep registers of all driving licences issued under any other written law. The purpose of a register is law enforcement and collection of revenue.

122. Searches

Corresponding Law:- Section 6 corresponds to section 6 of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[24].

Objects and reasons:- Section 6 allows any interest person or party to make searches in any register after paying the prescribed fee.

[21] This section also corresponds to section 3 of the Zambia Road Traffic Act, 2002 [Act No 11 of 2002]. This section also corresponds to section 1 of the Ghana National Road Safety Commission Act, 1999 [Act No 567 of 1999]. This section also corresponds to section 3 of the Irish Road Safety Authority Act, 2006 [Act No 14 of 2006]. This section also corresponds to sections 3(1) of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 Cap 361

[22] This section also corresponds to section 4 of the Zambia Road Traffic Act, 2002 [Act No 11 of 2002]. This section also corresponds to section 2 of the Ghana National Road Safety Commission Act, 1999 [Act No 567 of 1999]. This section also corresponds to section 4 of the Irish Road Safety Authority Act, 2006 [Act No 14 of 2006]. This section also corresponds to section 3 and 4 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361) respectively

[23] This section also corresponds to section 7 of the Irish Road Safety Authority Act, 2006 [Act No 14 of 2006]. This section also corresponds to section 7 of the Uganda Traffic and Road Safety Act, 1988 Cap 361

[24] This section also corresponds to section 8 of the Irish Road Safety Authority Act, 2006 [Act No 14 of 2006]. This section also corresponds to section 8 of the Uganda Traffic and Road Safety Act, 1998 Cap 361

123. Certified copies

Corresponding Law:- Section 7 corresponds to section 7 of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[25].

Objects and reasons:- Section 7 empowers the Registrar to furnish to an applicant certified copies of any entry in any register.

PART III

REGISTRATION OF MOTOR VEHICLES AND TRAILERS

124. Application of this Part

Corresponding Law:- Section 8 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 8 defines the applicability of this part in relation to registration of motor vehicles imported for use in the Partner States.

125. Registration of motor vehicles and trailers

***Corresponding Law*:-** Section 9 corresponds to section 9 of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[26].

Objects and Reasons:- Section 9 prohibits the owning or driving of a motor vehicle or trailer in any public place or in any other place without registering it under the provisions of this Part. It also empowers the Minister to prescribe conditions subject to which the provisions of this section will not apply to the motor vehicles in possession of dealers. It is also recognized that it is common practice for a person buying a vehicle privately to first check on the vehicle register who owns that vehicle in order to find out whether the person selling it is the legitimate registered owner. It also improves the quality of information held on the motor vehicle register. Where information on the register is inaccurate or out of date, enforcement of offences that rely on linking a vehicle to a person is seriously hampered. This provision seeks to overcome some of these problems. Offences like speeding, red-light running, and parking tickets and so on are very difficult to pursue, as are licensing fees, if we do not know who the vehicle owners are.

[25] This section also corresponds to sections 14 and 15 of the Irish Road Safety Authority Act, 2006 [Act No 14 of 2006]. This section also corresponds to section 9 of the Uganda Traffic and Road Safety Act, 1998 Cap 361

[26] This section also corresponds to sections 6 and 13 of the Kenya Traffic Act, Cap 403 Revised 2009 and the Uganda Traffic and Road Safety Act, 1998 (Cap 361) respectively

126. Registering a motor vehicle in the Partner State

Corresponding Law: Section 10 corresponds to section 8 and the spirit of the Tanzania Road Traffic Act, Cap, 168 Revised Edition 2002; section 6 and the spirit of the Kenya Traffic Act, Cap 403 Revised Edition 2009 and section 10 and the spirit of the Uganda Traffic and Road Safety Act, 1998 (Cap 361)

Objects and Reasons:- Section 10 allows each Partner State to register vehicles in its territory owned by its citizens and persons resident in such Partner State. This allowance is based on the principle that registering vehicles entails payment and collection of vehicle registration and other taxes connected with the registration of vehicles. Such source of revenue for each Partner State should not be tempered with.

127. Classification of motor vehicles, etc

Corresponding Law:- Section 11 corresponds to section 10 of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[27].

Objects and Reasons:- Section 11 empowers the Council to divide motor vehicles and trailers into such classes as to enable registration.

128. Power to refuse registration

Corresponding Law:- Section 12 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 12 empowers the Registrar to refuse registration of a motor vehicle or trailer which does not accord with the conditions prescribed in this section.

129. Identification marks

Corresponding Law:- Section 13 corresponds to section 14 of the Tanzania Road Traffic Act, Cap 168 R.E. 2002[28].

[27] This section also corresponds to section 21 of the Hong Kong Road Traffic Ordinance, Cap 374. This section also corresponds to section 11 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]. This section also corresponds to section 4 of the Kenya Traffic Act, Cap 403 Revised 2009. This section also corresponds to section 5 of the Malaysia Road Transport Act, 1987 [Act No 333 of 1987]

Objects and Reasons:- Section 13 prescribes the manner in which motor vehicle and trailer identification marks are to be and manner in which they are to be fixed.

130. Partner State identification mark or country code

Corresponding Law:- Section 14 corresponds to the provisions of international road traffic conventions (the United Nations Convention on Road Traffic signed at Geneva on 19th September, 1949 or the United Nations Convention on Road Traffic signed at Vienna on 8th November, 1968)

Objects and Reasons: Section 14 seeks to enable Partner States to agree on the type and form of identification marks or country codes to be applied on vehicles registered in the individual Partner States for identification purposes.

131. Suspension of registration of unsafe motor vehicles, trailers, etc

Corresponding Law:- Section 14 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R.E. 2002.

Objects and reasons:- Section 14 empowers the Registrar to suspend registration of an unsafe motor vehicle or trailer.

132. Using unregistered or unlicensed motor vehicles or trailers

Corresponding Law:- Section 15 corresponds to section 18 of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[29].

Objects and reasons:- Section 15 makes it an offence for any person using a vehicle or trailer that is not registered and spells out the sanctions for that offence.

133. Failure to return registration document

Corresponding Law:- Section 16 corresponds to section 18(f) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[30].

[28] This section also corresponds to section 4 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 11 of the Malaysia Road Transport Act, 1987 [Act No 333 of 1987]. This section also corresponds to section 12 of the Kenya Traffic Act, Cap 403 Revised 2009

[29] This section also corresponds to section 5 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]

Objects and reasons:- Section 16 makes it any offence for failure to return or surrender motor vehicle or trailer registration document to the Registrar when required so to do.

134. Offence of not fixing identification mark

Corresponding Law:- Section 17 corresponds to section 14 of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[31].

Objects and reasons:- Section 17 makes it an offence for failure to fix motor vehicle or trailer identification mark as prescribed by the regulation made under the Act.

135. Obscured identification mark

Corresponding Law:- Section 18 corresponds to section 14 of the Tanzania Road Traffic Act, Cap 168, and R. E. 2002[32].

Objects and reasons – Section 18 makes it an offence for fixing an obscured identification mark on the motor vehicle or trailer.

136. Motor vehicle dealer general registration certificate

Corresponding Law:- Section 19 corresponds to section 12 of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[33].

Objects and reasons:- Section 19 provides for the issuance of motor vehicle dealer general registration certificate to various classes of motor vehicle and trailer manufacturers and dealers.

137. Surrender of trade licence

Corresponding Law:- Section 20 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R.E. 2002[34]. This is a new provision.

[30] This section also corresponds to section 6 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]
[31] This section also corresponds to section 7 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 14 of the Malaysia Road Transport Act, 1987 [Act No 333 of 1987]
[32] This section also corresponds to section 8 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 44 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]
[33] This section also corresponds to section 9 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 45 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]. This section also corresponds to section 47 of the Zambia Road Traffic Act, 2002 [Act No 11 of 2002]. This section also corresponds to section 22 of the Malaysia Road Transport Act, 1987 [Act No 333 of 1987]

Objects and reasons:- Section 20 makes it a requirement for holders of trade licences to surrender the same to the Registrar in certain circumstances.

138. Use of vehicles by holders of trade licences

Corresponding Law:- Section 21 corresponds to section 12(1)(a) of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[35]

Objects and reasons:- Section 21 emphasizes the need for proper use of motor vehicle trade licences by holders of the same.

139. Misuse of trade licence

Corresponding Law:- Section 22 corresponds to section 12(3) of the Tanzania Road Traffic Act, Cap 168 R.E. 2002[36].

Objects and Reasons:- Section 22 makes it an offence for a person who holds a trade licence and misuses it. The provision also provides for sanctions to be imposed in case of contravention of the said provision.

140. Registration of motor vehicle, trailer, etc owned by the governments of Partner States or a diplomatic mission

Corresponding Law:- Section 23 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[37].

Objects and reasons:- Section 23 provides procedures for registration of motor vehicles and trailers belonging to the Government of the Partner State or belonging to diplomatic and consular missions and officers. It provides that the Council may specify the authority who may register certain motor vehicles of the Government of the Partner State. In addition, it provides that the national Ministry responsible for foreign affairs and international cooperation may register any motor vehicle or trailer owned by a diplomatic mission or owned by a person who is a diplomatic agent. The form in which certificate of registration for such vehicles are to be issued, the manner in which such registration certificate are to be

[34] This section also corresponds to section 10 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 46 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]. This section also corresponds to section 28 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[35] This section also corresponds to section 13 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 49 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]. This section also corresponds to section 46 of the Zambia Road Traffic Act, 2002 [Act No 11 of 2002]
[36] This section also corresponds to section 14 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 50 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]. This section also corresponds to section 51 of the Zambia Road Traffic Act, 2002 [Act No 11 of 2002]
[37] This section also corresponds to section 60 of the Indian Motor Vehicles Act, 1988 [Act No 59 of 1988]

sent to the owners and the special registration marks assigned to such vehicles are to be as prescribed by the Geneva Convention on Diplomatic Privileges.

141. Notice of change of ownership

Corresponding Law:- Section 24 corresponds to section 16 of the Tanzania Road Traffic Act, Cap 168 R. E.2002[38].

Objects and reasons:- Section 24 provides for recording of transfer of ownership of a motor vehicle or trailer in the certificate of registration by the registering authority when the property changes hands due to sale, or inheritance or purchase in public auction conducted by the Government of the Partner State. It also lays down that if the transfer is not reported to the registering authority within the prescribed time, the parties are liable for prosecution and if the party pays the prescribed amount in lieu of prosecution, no further action is to be taken.

PART IV

CONSTRUCTION AND USE OF MOTOR VEHICLES, TRAILERS AND EQUIPMENT[39]

142. Prohibition of sale of vehicles, etc, not complying with regulations as to construction

Corresponding Law:- Section 25 corresponds to section 39 of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[40].

Objects and reasons:- Section 25 sets out general provisions regarding constructions and maintenance of motor vehicles and trailers

143. Use of vehicles in dangerous conditions

Corresponding Law:- Section 26 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[41].

[38] This section also corresponds to section 50 of the Indian Motor Vehicles Act, 1988 [Act No 50 of 1988]. This section also corresponds to section 13 of the Malaysia Road Transport Act, 1987 [Act No 333 of 1987]
[39] This Part also corresponds to Part V of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]
[40] This section also corresponds to section 44 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]
[41] This section also corresponds to section 45 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 80 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]

Objects and reasons:- Section 26 criminalizes the use of motor vehicles or trailers that are in dangerous condition. The provision also lays down the sanction against the use of vehicle in dangerous condition.

144. Failure to comply with requirements for carriage of goods and persons, weights, etc of commercial vehicles

Corresponding Law:- Section 27 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[42].

Objects and reasons:- Section 27 prohibits the carrying of persons and goods mixed together and provides for sanctions to be imposed in case of failure to comply with this provision.

145. Liability for breach of road worthiness requirements

Corresponding Law:- Section 28 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[43].

Objects and reasons:- Section 28 makes it an offence to breach roadworthiness requirements.

146. Interpretation in respect of this Part

Corresponding Law:- Section 29 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[44].

Objects and reasons:- Section 29 defines certain words or phrases which have been used in this Part of the proposed Act.

PART V

TESTS OF VEHICLES AND ISSUE OF ROAD WORTHINESS CERTIFICATES[45]

[42] This section also corresponds to section 47 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]
[43] This section also corresponds to section 53 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 89 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]
[44] This section also corresponds to section 55 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 91 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]
[45] This Part also corresponds to Part VI of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This Part also corresponds to Part V of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]

147. Power to fix the age of motor vehicles

Corresponding Law:- Section 30 does not correspond to any law. It is a new provision.

Objects and reasons:- Section 30 gives power to a Partner State to fix the age of motor vehicles, having regard to the public safety, convenience and objects of this Act in the respective Partner State, specify the life of a motor vehicle or trailer reckoned from the date of its manufacture, after the expiry of which the motor vehicle shall not be deemed to comply with the requirements of this Act and the regulations hereunder; provided that the Partner State may specify different ages for different classes or different types of motor vehicles.

148. Examination of motor vehicles, trailer, etc in connection with registration, etc

Corresponding Law:- Section 31 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 31 lays down the procedure to be followed in the examination of motor vehicles or trailers.

149. Tests of condition of motor vehicles

Corresponding Law:- Section 32 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[46].

Objects and reasons:- Section 32 lays down the types and frequencies of tests that will be carried out on motor vehicles or trailers.

150. Examination orders for examination of motor vehicles

Corresponding Law:- Section 33 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 33 lays down the mode in which examination orders will be issued by the registrar, or police to drivers or registered owners of motor vehicles or trailers.

151. Persons to conduct examination of vehicles

[46] This section also corresponds to section 56 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 92 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]

Corresponding Law:- Section 34 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[47].

Objects and reasons:- Section 34 lays down the provision that the Registrar may maintain motor vehicle examination centres for the purposes of examining motor vehicles.

152. Examination of motor vehicles, trailers, etc on road by police officer or motor vehicle examiner and removal to motor vehicle examination centre or police station

Corresponding Law:- Section 35 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 35 empower the police or authorized motor vehicle examiner to examine a motor vehicle on road and to remove the vehicle to a police station or examination centre.

153. Examination of commercial vehicles

Corresponding Law:- Section 36 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[48].

Objects and reasons:- Section 36 empowers an authorized person or the police to examine a commercial vehicle and to detain the same during such examination and provides for the sanction in case the person in charge refuses to obey the order given to him

154. Power to prohibit driving of unfit motor vehicles

Corresponding Law:- Section 37 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[49].

Objects and reasons:- Section 37 prohibits the driving of unfit motor vehicles

155. Prohibition conditional on examination

Corresponding Law:- Section 38 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[50].

[47] This section also corresponds to section 57 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 93 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]
[48] This section also corresponds to section 60 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 100 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]
[49] This section also corresponds to section 61 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 101 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]

Objects and reasons:- Section 38 lays the condition for prohibiting vehicles that are not adapted to carry passengers unless and until the same has been inspected.

156. Power to prohibit driving of cargo vehicles

Corresponding Law:- Section 39 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[51].

Objects and reasons:- Section 39 gives power to a vehicle examiner or person authorized or police officer to prohibit the driving of certain cargo vehicles.

157. Power of motor vehicle examiner on examination of motor vehicle

Corresponding Law:- Section 40 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 40 gives powers to the vehicle examiner when examining the vehicle.

158. Motor vehicle not in accordance with particulars in register, form of application for registration or notice of transfer

Corresponding Law:- Section 41 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 41 lays down the condition for licensing or not licensing a motor vehicle or trailer with particulars that are not consistent with the records kept by the Registrar

159. Motor vehicle not roadworthy or not in accordance with the Act or condition of motor vehicle licence

Corresponding Law:- Section 42 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.

[50] This section also corresponds to section 62 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 102 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]
[51] This section also corresponds to section 63 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 103 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]

Objects and reasons:- Section 42 lays down the condition that a vehicle that is not roadworthy or not in accordance with certain requirements will be suspended from using the road.

160. Removal of prohibitions

Corresponding Law:- Section 43 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[52].

Objects and reasons:- Section 43 lays the procedure for removing prohibitions imposed under the provisions of the proposed Act.

161. Fitting and supply of defective or unsuitable vehicle parts

Corresponding Law:- Section 44 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[53].

Objects and reasons:- Section 44 prohibits the supply or fitting of motor vehicle parts that are substandard and empowers authorized officers to enforce this provision.

PART VI

LICENSING OF MOTOR VEHICLES AND TRAILERS

162. Motor vehicles and trailers to be licensed

Corresponding Law:- Section 45 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002.[54]

Objects and reasons:- Section 45 mandates the licensing of motor vehicle and trailers under the proposed Act.

163. Application for licence

Corresponding Law:- Section 46 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[55]

[52] This section also corresponds to section 105 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]
[53] This section also corresponds to section 66 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 107 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]
[54] This section also corresponds to section 15 of the Kenya Traffic Act, Cap 403 Revised 2009

Objects and reasons:- Section 46 lays down the procedure for the application for the motor vehicle or trailer licences under the proposed Act.

164. Conditions for issue of licence

Corresponding Law:- Section 47 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[56]

Objects and reasons:- Section 47 lays down the conditions and requirements for the issue of the motor vehicle or trailer licences under the proposed Act.

165. Vehicle inspection certificates

Corresponding Law:- Section 48 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[57].

Objects and reasons:- Section 48 lays down the requirement for the motor vehicle or trailer inspection certificates before the issue of the motor vehicle or trailer licence under the proposed Act.

166. Form of licences

Corresponding Law:- Section 49 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[58].

Objects and reasons:- Section 49 lays down the form in which the motor vehicle and trailer licences will be issued.

167. Licences to be carried on vehicle

Corresponding Law:- Section 50 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[59].

Objects and reasons:- Section 50 lays down the requirement for the carrying of licences in motor vehicles.

[55] This section also corresponds to section 16 of the Kenya Traffic Act, Cap 403 Revised 2009
[56] This section also corresponds to section 17 of the Kenya Traffic Act, Cap 403 Revised 2009
[57] This section also corresponds to section 17A of the Kenya Traffic Act, Cap 403 Revised 2009
[58] This section also corresponds to section 18 of the Kenya Traffic Act, Cap 403 Revised 2009
[59] This section also corresponds to section 20 of the Kenya Traffic Act, Cap 403 Revised 2009

168. Duplicate licence

Corresponding Law:- Section 51 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[60].

Objects and reasons:- Section 51 lays down the issuance of duplicate licences where the same have been defaced, mutilated or rendered illegible.

169. Recovery of licence fee by civil process

Corresponding Law:- Section 52 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[61].

Objects and reasons:- Section 52 lays down the procedure for recovery of unpaid fees for the licensed motor vehicle.

170. Penalties under this Part

Corresponding Law:- Section 53 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[62].

Objects and reasons:- Section 53 makes penalties for contravention of the provisions of this Part of the proposed Act.

PART VII

LICENSING OF PUBLIC SERVICE AND GOODS VEHICLES[63]

171. Classification of vehicle operators' licences

Corresponding Law:- Section 54 corresponds to section 11 of the Transport Licensing Act, Cap 317 R. E. 2002[64].

[60] This section also corresponds to section 21 of the Kenya Traffic Act, Cap 403 Revised 2009)
[61] This section also corresponds to section 28 of the Kenya Traffic Act, Cap 403 Revised 2009
[62] This section also corresponds to section 29 of the Kenya Traffic Act, Cap 403 Revised 2009
[63] This Part also corresponds to Part V of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]. This Part also corresponds to Part VIII of the Zambia Road Traffic Act, 2002 [Act No 11 of 2002]
[64] This section also corresponds to section 70 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]. This section also corresponds to section 14 of the Malaysia Commercial Vehicles Licensing Board Act, 1987 [Act No 334 of 1987]

Objects and reasons:- Section 54 lays down that no motor vehicle shall be used as a transport vehicle without a licence issued by transport authorities to use the vehicle as such in a public place.

172. Transport regulator to organize public transport and keep statistics

Corresponding Law:- Section 55 corresponds to section 4 of the Transport Licensing Act, Cap 317 R. E. 2002[65].

Objects and reasons:- Section 55 authorizes the transport regulator to organize and supervise public transport. It also specifies the transport regulator to whom applications for licences to operate transport vehicles on intra-district and intra-region routes has to be made.

173. Omnibus and country taxicab operator's licence

Corresponding Law:- Section 56 is a new provision[66].

Objects and reasons:- Section 56 specifies the omnibus and country taxicab operator's licence to be issued by the transport regulator.

174. Procedure of national regulator for public omnibus and country taxicab operator's licence

Corresponding Law:- Section 57 is a new provision[67].

Objects and reasons:- Section 57 lays down the procedure in considering applications for public omnibus and country taxicab operator's licence by the regulator and also provides for empowering the transport regulator to issue direction to transport operators.

175. Grant of omnibus and country taxicab operator's licence

Corresponding Law:- Section 58 is a new provision[68].

[65] This section also corresponds to section 71 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]. This section also corresponds to sections 67 and 68 of the Indian Motor Vehicles Act, 1988 [Act No 59 of 1988]
[66] This section also corresponds to section 73 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[67] This section also corresponds to section 74 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[68] This section also corresponds to section 75 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]. This section also corresponds to section 72 of the Indian Motor Vehicles Act, 1988 [Act No 59 of 1988]

Objects and reasons:- Section 58 empowers the transport regulator to grant or refuse an omnibus and country taxicab operator's licence and also to impose certain conditions and attach such conditions to the permits and licences issued.

176. Public omnibus and country taxicab operator to give notice to the national transport regulator

Corresponding Law:- Section 59 is a new provision[69].

Objects and reasons:-Section 59 lays down the procedure to be followed by a licensed public omnibus or country taxicab operator of his intention to surrender his licence or his intention not to seek renewal of his licence after its expiry. This is intended to prevent breakdown in the road transport industry or deterioration in service to the public by failure to give the required notice.

177. Road service not to be suspended without permission

Corresponding Law:- Section 60 is a new provision[70].

Objects and reasons:- Section 60 lays down the procedure to be followed by the holder of an operator's licence who wishes to suspend the operation of any service authorized under the licence held by him.

178. Temporary replacement of authorized vehicles

Corresponding Law:- Section 61 corresponds to section 12 of the Transport Licensing Act, Cap 317 R. E. 2002[71].

Objects and reasons:- Section 61 enables the holder of the licence to replace the vehicles covered by the licence by another vehicle of the same nature with the permission of the transport regulator which granted the licence.

179. Duration of licences

Corresponding Law:- Section 62 corresponds to section 12 of the Transport Licensing Act, Cap 317 R. E. 2002[72].

[69] This section also corresponds to section 76 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[70] This section also corresponds to section 77 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[71] This section also corresponds to section 78 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]. This section also corresponds to section 107 of the Zambia Road Traffic Act, 2002 [Act No 11 of 2002]. This section also corresponds to section 23 of the Malaysia Commercial Vehicles Licensing Board Act, 1987 [Act No 334 of 1987]

Objects and reasons:- Section 62 lays down the validity of a licence of any kind to remain for the period stated on the licence or until it is revoked by the transport regulator

180. Extension of routes

Corresponding Law:- Section 63 is a new provision[73].

Objects and reasons:- Section 63 gives power to the transport regulator to extend routes in public interest.

181. Temporary omnibus operator's licence

Corresponding Law:- Section 64 corresponds to section 12 of the Transport Licensing Act, Cap 317 R. E. 2002[74].

Objects and reasons:- Section 64 confers upon the transport regulator to issue temporary omnibus operator's licence to transport vehicles for a limited period for the use of the vehicle temporarily for certain specified reasons

182. Temporary licence

Corresponding Law:- Section 65 corresponds to section 12 of the Transport Licensing Act, Cap 317 R. E. 2002[75].

Objects and reasons:- Section 65 confers upon the transport regulator to issue temporary transport operator's licence to transport vehicles for a limited period for the use of the vehicle temporarily for certain specified reasons

183. Application for goods operator's licence

Corresponding Law:- Section 66 corresponds to section 19 of the Transport Licensing Act, Cap 317 R. E. 2002[76].

[72] This section also corresponds to section 79of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]. This section also corresponds to section 17 of the Malaysia Commercial Vehicles Licensing Board Act, 1987 [Act No 334 of 1987]
[73] This section also corresponds to section 80 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[74] This section also corresponds to section 81 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[75] This section also corresponds to section 82 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[76] This section also corresponds to section 83 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]. This section also corresponds to section 77 of the Indian Motor Vehicles Act, 1988 [Act No 59 of 1988]

Objects and reasons:- Section 66 prescribes the procedure and form of application for goods operator's licence.

184. Grant of goods operator's licence

Corresponding Law:- Section 67 corresponds to section 20 of the Transport Licensing Act, Cap 317 R. E. 2002[77].

Objects and reasons:- Section 67 provides for the grant of goods operator's licence, the power of the transport regulator to grant or refuse such licence and to impose conditions and attach such conditions to the licence.

185. Application for town taxicab and rental vehicle operator's licence

Corresponding Law:- Section 68 is a new provision[78].

Objects and reasons:- Section 68 lays down the procedure in applying for town taxicab and rental vehicle operator's licence.

186. Town taxicab and rental vehicle operator's licence

Corresponding Law:- Section 69 is a new provision[79].

Objects and reasons:- Section 69 authorizes the holder of a rental vehicle operator's licence to hire out the vehicles specified in the licence on daily, weekly or monthly basis.

187. Grant of town taxicab, country taxicab and rental vehicle operator's licence

Corresponding Law:- Section 70 corresponds to section 27 of the Transport Licensing Act, Cap 317 R. E. 2002[80].

Objects and reasons:- Section 70 provides for the grant of town taxicab, country taxicab and rental vehicle operator's licence, the power of the transport regulator to grant or refuse such licence and to impose conditions and attach such conditions to the licence.

[77] This section also corresponds to section 84 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]. This section also corresponds to section 79 of the Indian Motor Vehicles Act, 1988 [Act No 59 of 1988]
[78] This section also corresponds to section 85 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[79] This section also corresponds to section 86 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[80] This section also corresponds to section 87 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]

188. Grant of owner's transport vehicle permit

Corresponding Law:- Section 71 is a new provision[81].

Objects and reasons:- Section 71 provides for the grant of owner's transport vehicle permit, the power of the transport regulator to grant or refuse such licence and to impose conditions and attach such conditions to the licence.

189. Renewal of certain vehicle operator's licence

Corresponding Law:- Section 72 is a new provision[82].

Objects and reasons:- Section 72 lays down the validity of a licence of any kind as one year. It also provides for the renewal of certain vehicle operator's licence for one year, the time within which application for renewal of licence should be submitted to the transport regulator and the conditions subject to which the licence may be renewed.

190. Amendment of licence

Corresponding Law:- Section 73 corresponds to section 29 of the Transport Licensing Act, Cap 317 R. E. 2002[83].

Objects and reasons:- Section 73 lays down the procedure for amendment of vehicle operator's licences.

191. Review of licences

Corresponding Law:- Section 74 is a new provision[84].

Objects and reasons:- Section 74 lays down a transparent procedure for reviewing vehicle operator's licences or any class of vehicle operator's licences.

192. Operator's vehicle licence

Corresponding Law:- Section 75 is a new provision[85].

[81] This section also corresponds to section 88 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[82] This section also corresponds to section 89 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]. This section also corresponds to section 21 of the Malaysia Commercial Vehicles Licensing Board Act, 1987 [Act No 334 of 1987]
[83] This section also corresponds to section 90 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[84] This section also corresponds to section 91 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]

Objects and reasons:- Section 75 classifies the operator's vehicle licences into six main classes.

193. Cancellation of licence

Corresponding Law:- Section 76 corresponds to section 30 of the Transport Licensing Act, Cap 317 R. E. 2002[86].

Objects and reasons:- Section 76 seeks to empower the transport regulator which granted the licence to cancel the licence for a specified period for the breach of the conditions of the licence or for specific offences specified in this section.

194. Alteration of records

Corresponding Law:- Section 77 is a new provision[87].

Objects and reasons:- Section 77 empowers the transport regulator to alter the records where a vehicle operator's licence has been amended, renewed or cancelled.

195. Goods vehicle to be licensed to carry passengers

Corresponding Law:- Section 78 is a new provision[88].

Objects and reasons:- Section 78 prohibits the use of goods vehicles to carry passengers without being licensed.

196. Special licence

Corresponding Law:- Section 79 is a new provision[89].

Objects and reasons:- Section 79 lays down the need for the issue of special licence for a goods vehicle to be allowed to carry passengers.

197. Conditions for issue of basic or special licence

[85] This section also corresponds to section 94 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[86] This section also corresponds to section 95 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[87] This section also corresponds to section 96 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[88] This section also corresponds to section 100 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[89] This section also corresponds to section 101 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]

Corresponding Law:- Section 80 corresponds to section 28 of Transport Licensing Act, Cap 317 R. E. 2002[90].

Objects and reasons:- Section 80 lays down the conditions under which a basic or special licence is to issue under the proposed Act.

198. Inspection of goods vehicles

Corresponding Law:- Section 81 is a new provision[91].

Objects and reasons:- Section 81 lays the condition for the issue of a licence for carrying passengers for a goods vehicle that it has to undergo inspections to satisfy certain safety conditions.

199. Refusal to register

Corresponding Law:- Section 82 is a new provision[92].

Objects and reasons:- Section 82 fives power to the Registrar to refuse to register a motor vehicle or trailer that does not comply with the minimum requirements under the Act or for any other cause.

PART VIII

LICENSING OF DRIVERS OF COMMERCIAL VEHICLES[93]

200. Obligation of drivers of commercial vehicles to be licensed

Corresponding Law:- Section 83 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[94].

Objects and reasons:- Section 83 lays the requirement for commercial drivers to be licensed in addition to holding driving licences issued under other written laws.

[90] This section also corresponds to section 102 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[91] This section also corresponds to section 103 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[92] This section also corresponds to section 104 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[93] This Part also corresponds to Part VIII of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This Part also corresponds to Part VI of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]. This section also corresponds to section 47 of the Antigua and Barbuda Vehicles and Road Traffic Act, 1947 (Cap 460)
[94] This section also corresponds to section 77 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 112 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]

201. Approved centres to be allowed to provide professional defensive driving courses

Corresponding Law:- Section 84 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 84 lays down the requirement for approved centres to be allowed to provide professional driving course and skills.

202. Grant of driver certificate of professional competence, fitness as regards conduct

Corresponding Law:- Section 85 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[95].

Objects and reasons:- Section 85 provides procedures for the grant of driver certificate of professional competence, fitness as regards conduct.

203. Registration and licensing commercial motorcycles and drivers of commercial motor cycles

Corresponding Law:- Section 86 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[96].

Objects and reasons:- Section 86 makes provisions for registration and licensing of commercial motorcycles and driver of commercial motorcycles on the basis of complying to certain conditions laid down in the proposed Act.

204. Revocation or suspension of driver certificate of professional competence

Corresponding Law:- Section 87 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[97].

Objects and reasons:- Section 87 makes provisions for revocation or suspension of driver certificate of professional competence if the holder's conduct is such as to make the holder unfit to hold that certificate.

205. Disqualification on revocation of driver certificate of professional competence

[95] This section also corresponds to section 78 of the Sierra Leone Road Traffic Act, 2004 [Act No 5 of 2007]. This section also corresponds to section 113 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]
[96] This section also corresponds to section 79 of the Sierra Leone Road Traffic Act, 2004 [Act No 5 of 2007]
[97] This section also corresponds to section 80 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 114 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]

Corresponding Law:- Section 88 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[98].

Objects and reasons:- Section 88 makes provisions for disqualification on revocation of certificate of competence by the Registrar of the motor vehicles and trailers on the basis of the conduct of the holder.

206. Surrender, return and endorsement of revoked or suspended driver certificate of professional competence

Corresponding Law:- Section 89 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[99].

Objects and reasons:- Section 89 makes provisions for the surrender, return and endorsement of revoked or suspended driver certificate of professional competence

207. Exemption from driver certificate of professional competence requirements

Corresponding Law:- Section 90 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 90 makes provisions for exemption for the need to obtain a commercial vehicle driver's licence under the proposed Act.

208. Appeals to court

Corresponding Law:- Section 91 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[100].

Objects and reasons:- Section 91 makes provision for appeals to courts of law by persons aggrieved by the registrar's action or inaction in relation to a commercial vehicle driver's grant or disqualification of licence.

PART IX

[98] This section also corresponds to section 81 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 115 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004].
[99] This section also corresponds to section 82 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 116 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]
[100] This section also corresponds to section 83 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 117 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]

ENFORCEMENT AND INSTITUTION OF PROCEEDINGS

(a) Enforcement[101]

209. Examination of vehicle on road

Corresponding Law:- Section 92 corresponds to section 81 of the Road Traffic Act, Cap 168 R. E. 2002[102].

Objects and reasons:- Section 92 gives power to a police officer to examine a motor vehicle or trailer on road where he is of the opinion that the vehicle has or is being used in contravention of the provisions of the proposed Act.

210. Removal of abandoned vehicles

Corresponding Law:- Section 93 corresponds to section 84 of the Road Traffic Act, Cap 168 R. E. 2002[103].

Objects and reasons:- Section 93 makes provision empowering Police Officers to tow away the motor vehicles which are abandoned or left unattended on any public road and recover the cost of removal from the owners of such vehicles

211. Removal of broken-down vehicle

Corresponding Law:- Section 94 corresponds to section 85 of the Road Traffic Act, Cap 168 R. E. 2002[104].

Objects and reasons:- Section 94 makes provision empowering Police Officers to tow away the motor vehicles which are abandoned or left unattended on any public road and recover the cost of removal from the owners of such vehicles.

[101] This Part also corresponds to Part VIII of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[102] This section also corresponds to section 150 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[103] This section also corresponds to section 107 of the Hong Kong Road Traffic Ordinance, Cap 374. This section also corresponds to section 153 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[104] This section also corresponds to section 106 of the Hong Kong Road Traffic Ordinance, Cap 374. This section also corresponds to section 154 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]

212. Police may require motor vehicle to be driven to police station and detain vehicle

Corresponding Law:- Section 95corresponds to section 87 of the Road Traffic Act, Cap 168 R. E. 2002[105].

Objects and reasons:- Section 95 empowers the police officers to require motor vehicles or trailers to be driven to a police station and where necessary, detain the same for specific reason(s).

213. Power to stop, inspect and detain vehicle

Corresponding Law:- Section 96 corresponds to sections 43 and 44 of the Transport Licensing Act, Cap 317 R. E. 2002.

Objects and reasons:- Section 96 gives power to the police force to stop, inspect or detain a motor vehicle where it is suspected of having committed an offence. This power is also given to a member of the licensing authority or administrative officer.

(b) Institution of proceedings

214. Institution of proceedings

Corresponding Law:- Section 97corresponds to section 91 of the Road Traffic Act, Cap 168 R. E. 2002[106].

Objects and reasons:- Section 97lays the procedure to be used in instituting proceedings for offences committed under the proposed Act.

215. Charge and summons

Corresponding Law:- Section 98 corresponds to section 92 of the Road Traffic Act, Cap 168 R. E. 2002[107].

Objects and reasons:- Section 98 makes provisions for the mode of charges and summons applicable under the proposed Act

[105] This section also corresponds to section 156 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[106] This section also corresponds to section 161 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[107] This section also corresponds to section 162 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]

216. Application of Criminal Procedure Act

Corresponding Law:- Section 99 corresponds to section 93 of the Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 99 makes provision for the application of the Criminal Procedure Act during trial or sentencing for offences made under the proposed Act.

217. Admissibility of certificates

Corresponding Law:- Section 100 corresponds to section 94 of the Road Traffic Act, Cap 168 R. E. 2002[108].

Objects and reasons:- Section 100 lays the evidential value or strength of the certificates purporting to have been issued by vehicle inspectors and after they have been certified by the Registrar of Motor vehicles and trailers

PART X

MISCELLANEOUS PROVISIONS

218. Motor omnibus to carry conductor

Corresponding Law:- Section 101 corresponds to Rule 2 of the Tanzania Traffic (Motor Omnibuses) (Conduct of Drivers, Conductors and Passengers) Rules, Government Notice No 242 of 1949 of the Road Traffic Act, Cap 168 R. E. 2002[109].

Objects and reasons:- Section 101 provides for the need to a have a conductor's licence and prohibits persons in employing as conductor, a person who is not licensed as a conductor.

219. Conductor's licence

Corresponding Law:- Section 102 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[110].

[108] This section also corresponds to section 164 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[109] This section also corresponds to section 19 of the Indian Motor Vehicles Act, 1988 [Act No 59 of 1988]. This section also corresponds to section 56 of the Malaysia Road Transport Act, 1987 [Act No 333 of 1987]. This section also corresponds to section 43 of the Antigua and Barbuda Vehicles and Road Traffic Act, 1947 (Cap 460)

Objects and reasons:- Section 102 lays down that no one is practice as conductor of an omnibus if he is not licensed under the proposed Act.

220. Application for conductor's licence

Corresponding Law:- Section 103 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[111].

Objects and reasons:- Section 103 lays down the procedure in making an application for a conductor's licence, the form of the licence and the fee

221. Particulars on conductor's licence

Corresponding Law:- Section 104 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 104 provides the details that are required to be provided by the conductor to the licensing authority and which are to be kept by the licensing authority as particulars describing the conductor

222. Duration of conductor's licence

Corresponding Law:- Section 105 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[112].

Objects and reasons:- Section 105 lays the duration which the conductor's licence will remain valid and after which it has to be renewed.

223. Renewal of conductor's licence

Corresponding Law:- Section 106 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002.

Objects and reasons:- Section 106 makes provisions for renewal of the conductor's licence after it has expired so as to comply with the provisions of the proposed Act.

[110] This section also corresponds to section 44 of the Antigua and Barbuda Vehicles and Road Traffic Act, 1947 (Cap 460)

[111] This section also corresponds to section 30 of the Indian Motor Vehicles Act, 1988 [Act No 59 of 1988]. This section also corresponds to section 45 of the Antigua and Barbuda Vehicles and Road Traffic Act, 1947 (Cap 460)

[112] This section also corresponds to section 46 of the Antigua and Barbuda Vehicles and Road Traffic Act, 1947 (Cap 460)

224. Cancellation and suspension of conductor's licence

Corresponding Law:- Section 107 is a new provision. It does not correspond to any section of the Road Traffic Act, Cap 168 R. E. 2002[113].

Objects and reasons:- Section 107 lays down certain norms which will constitute disqualification for the grant of conductor's licence

225. Tickets and fares

Corresponding Law:- Section 108 is a new provision[114].

Objects and reasons:- Section 108 prohibits travelling in public transport vehicles without tickets or passes.

226. Recovery of fares and wilful damage to public service vehicle

Corresponding Law:- Section 109 is a new provision[115].

Objects and reasons:- Section 109 makes provisions for recovery of fares by the transport operator where a passenger fails to pay fare for the journey covered. It also provides provision for recovery of damages for a passenger's wilful damage to the vehicle of the transport operator.

227. Recovery of fares by passengers

Corresponding Law:- Section 110 is a new provision[116].

Objects and reasons:- Section 110 makes provisions for the recovery of fares by passengers after the transport operator had failed to provide the means of transport agreed.

228. Importuning passenger or prohibition of touting

[113] This section also corresponds to section 31 of the Indian Motor Vehicles Act, 1988 [Act No 59 of 1988]
[114] This section also corresponds to section 120 of the Zambia Road Traffic Act, 2002 [Act No 11 of 2002]
[115] This section also corresponds to section 97 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[116] This section also corresponds to section 98 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]

Corresponding Law:- Section 111 is a new provision[117].

Objects and reasons:- Section 111 prohibits owners, drivers, conductors or persons acting on behalf of owners, drivers or conductors of public service vehicles plying for hire or authorized to carry passengers to make any noise or sound any instrument in order to attract the attention of the public or of a possible passenger in such a manner as to constitute a nuisance to any person.

229. General penalty

Corresponding Law:- Section 112 corresponds to section 113 of the Road Traffic Act, Cap 168 R. E. 2002; section 19 of the Motor Vehicles Insurance Act, Cap 169 R. E. 2002[118].

Objects and reasons:- Section 112 contains the general provision for punishment of offences, which is available in the absence of any specific provision for punishment applicable in a given case.

230. General regulations

Corresponding Law:- Section 113 corresponds to section 114 of the Road Traffic Act, Cap 168 R. E. 2002; section; section 42 of the Transport Licensing Act, Cap 317 R. E.; section 18 of the Motor Vehicles Insurance Act, Cap 169 R. E. 2002; sections 4 and 5 of the Motor Vehicle Driving Schools (Licensing) Act, cap 163 R. E. 2002[119] .

Objects and reasons:- Section 113 empowers the national Minister to make rules and regulations for the better carrying out of the provisions of the proposed Act

231. Act to have overriding effect

Corresponding Law:- Section 114 does not correspond to any section of the Tanzania Road Traffic Act, Cap 168 R. E. 2002[120].

Objects and reasons:- Section 114 provides overriding effect of the proposed Act over corresponding provisions of other written laws with the effect of removing any confusion or contradiction that may arise

[117] This section also corresponds to section 99 of the Uganda Traffic and Road Safety Act, 1998 [Cap 361]
[118] This section also corresponds to section 142 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 132 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]
[119] This section also corresponds to section 143 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 133 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]. This section also corresponds to section 131 of the Hong Kong Road Traffic Ordinance, Cap 374
[120] This section also corresponds to section 93 of the Antigua and Barbuda Vehicles and Road Traffic Act, 1947 [Cap 460]

232. Repeals and savings

Corresponding Law:-

Section 115 corresponds to section 117 of the Road Traffic Act, Cap 168 R. E. 2002[121] and section 180 of the Uganda Traffic and Road Safety Act, 1998, Cap 361.

[121] This section also corresponds to section 145 of the Sierra Leone Road Traffic Act, 2007 [Act No 5 of 2007]. This section also corresponds to section 135 of the Ghana Road Traffic Act, 2004 [Act No 683 of 2004]

APPENDIX 3

COMPARISON OF VARIOUS LEGISLATION ON MOTOR VEHICLES REGISTRATION

Name of country	Legal framework	Specific section of legal framework dealing with the matter in question	Ministry / Minister responsible for the legal framework	Legal lead authority
Uganda	The Traffic and Road Safety Act, 1998 [Cap 361]	*1.* **Section 3**: *Chief licensing officer of motor vehicles* 3(1) Subject to any written law relating to the appointment of persons to the public service, the Minister shall, by notice in the *Gazette,* designate a public officer as a chief licensing of motor vehicles.	1. **Section 2**: *Interpretation* 2(1)(ll) "*Minister*" means the Minister to whom functions under this Act are assigned.	Transport
		2. **Section 12**: *Application for registration of motor vehicles, etc* 12(1) An application for the registration of a motor vehicle, trailer or engineering plant shall be made in the prescribed form by the owner of the motor vehicle, trailer or engineering plant **<u>to the licensing officer</u>** and shall be accompanied by the prescribed fee	*3.* **Section 61**: *Establishment of Transport Licensing Board* 61(1) The Minister shall appoint the chairperson,; two representatives of the travel industry and two representatives from the motor industry	

		3. **Section 13**: *Registration of motor vehicles, etc* 13(1) A licensing officer shall, prior to the registration of a motor vehicle, trailer or engineering plant, verify the particulars in the application for registration and shall satisfy himself ……	3. **Section 168**: *Establishment of the National Road Safety Council* 168(2) Members of the National Road Safety Council are appointed by the Minister	
Ghana	The Road Traffic Act, 2004 [Act No 683]	**Section 38**; *Registration of motor vehicles and trailers* 38(2) A person seeking registration of a motor vehicle or trailer shall apply in the prescribed form to the **Licensing Authority**	1. **Section 52**: *Interpretation* 52(1) "Licensing Authority" means the Driver and Vehicle Licensing Authority 2. **Section 136**: *General Interpretation* **"Minister"** means the Minister responsible for Roads and Transport	Driver and Vehicle Licensing Authority [DVLA], Ministry of Transport
Kenya	The Traffic Act, Cap 403 Revised Edition 2009	*1.* **Section 3:** *Appointment of officers* 3(1) The Minister shall, by notice in the Gazette, appoint a Registrar of Motor Vehicles, who shall be responsible for the registration and licensing of motor vehicles and trailers and form the licensing of drivers and for the keeping of such records in relation thereto as are required by this Act.	Minister is not defined	The Registrar, Ministry of Finance
Zambia	The Road Traffic Act, 2002 [Act No 11 of 2002]	1. **Section 3**: *Establishment of the Agency* 3(1) There is hereby established the Road Transport and Safety Agency which shall be a body corporate with perpetual succession and a common seal, capable of suing and being sued in its corporate name, and with power, subject to the provisions of this Act, to do all such acts and things as a body corporate may, by law do or perform.	1. **Section 2**: *Interpretation* 'licensing officer" means a person appointed by the Agency as licensing officer under section 226	Road Transport and Safety Agency [RTSA], Ministry of Transport

		2. **Section 7**: *Motor vehicle and trailer registration* 7(1) The Director shall keep register of all motor vehicles and trailers and may upon payment of the prescribed fee, supply to any person applying for a copy of such entries as that person shows has reasonable cause to require	Ministry of Transport	
		3. **Section 10**: *Motor vehicle to be cleared by Customs and Interpol* 10(1) Notwithstanding the provisions of this Act, where a motor vehicle is imported into Zambia, the owner or person in charge of the motor vehicle shall produce, to a Customs Officer at a port of entry a declaration under the Customs and Excise Act in respect of the motor vehicle	2. **Section 226**: *Licensing officers, etc* 226(1) The Agency shall appoint such licensing officers as may be necessary for the due carrying out of the provisions of this Act and the regulations made under it.	
		4. **Section 11**: *Registration of Motor vehicle and trailer* 11(3) The licensing officer to whom such application is made shall assign to the motor vehicle or trailer a registration mark and the number containing such feature as the Minister may, on the recommendation of the Agency, by statutory instrument prescribe such registration mark and number shall not be transferable on the sale or disposal of the motor vehicle or trailer …..		
Tanzania	The Road Traffic Act, Cap 168 R. E. 2002	Section 3(1): Subject to the provisions of any written law relating to the appointment of persons to public service, the Minister for the time being responsible for finance may, by notice in the Gazette, appoint a Registrar of Motor Vehicles	Section 2(1) Minister defined as Minister responsible for road traffic Section 3(1) Minister form the time being responsible for finance	Registrar, Ministry of Finance

South Africa	The National Road Traffic Act 93 of 1996		1. **Section 1**: *Definition* "**Minister**" means the Minister of Transport, or any other person authorized by him to exercise any power or perform any duty or function which such Minister is empowered or obliged to exercise or perform in terms of this Act	Registering Authority, Ministry of Transport
			2. **Section 1**: *Definition* "**registering authority**" means a registering authority appointed as such in accordance with the laws of any province	
Sierra Leone				

Zanzibar	The Road Traffic Decree, Cap 135	1. **Section 5**: *Principal Licensing Authority and licensing authorities* 5(1) The British Resident shall appoint a Principal Licensing Authority. 5(2) The Principal Licensing Authority shall- (a) appoint such licensing authorities as he may deem necessary for the purpose of this decree; and (b) assign to each licensing authority a district or area within which such licensing authority shall exercise such powers and duties as he may be directed to perform under section 6. 5(3) The Principal Licensing Authority shall be charged with the general administration of this Decree, and all licensing authorities shall be under his direction. 5(4) The Principal Licensing Authority shall be the Central Registrar of Licences. He shall keep the prescribed registers and indices and shall register therein the prescribed manner all licences issued under this Decree *2.* **Section 6**: *General duties of licensing authorities* A licensing authority shall be charged with the following duties- (a) the licensing and registration of vehicles; (b) the licensing and registration of drivers of motor vehicles; or (c) any other duties assigned to him under the provisions of this Decree.	Not defined	Principal Licensing Authority

Lesotho	The Road Traffic Act, 1981 [Act No 8 of 1981]	*1.* **Section 3**: *Appointment of officers* 3(1) The Minister shall, subject to the law relating to public service, by notice in the *Gazette*, appoint- (a) a Traffic Commissioner, who shall be the registering authority and responsible for the registration and licensing of motor vehicles and trailers, for licensing drivers and keeping such records in relation thereto as are required by this Act; (b) such motor vehicle examiners and driving test examiners as are necessary for carrying out the purpose of this Act. 3(2) The Traffic Commissioner shall designate such licensing officers as may be necessary for carrying out the purposes of this Act.	Transport	Traffic Commissioner, Ministry of Transport
		2. **Section 7**: *Application for registration* 7(2) An application for registration of a motor vehicle or trailer shall be accompanied by- (d) in all cases of motor vehicles or trailers imported into Lesotho- (i) a certificate from the Lesotho Mounted Police , to the effect that the motor vehicle or trailer is not suspected of having been unlawfully acquired; (ii) a certificate from the Lesotho Customs Office to the effect that the motor vehicle or trailer has been cleared in accordance with the law relating to Customs. (e) in the case of all second-hand motor vehicles or trailers a certificate in the prescribed form from a motor vehicle examiner that such motor vehicle or trailer is roadworthy.		

Trinidad and Tobago	The Motor Vehicles and Road Traffic Act, Cap 48:50	1. **Section 4**: *Transport Commissioner* 4(1) The Transport Commissioner is the Licensing Authority and shall be charged with responsibility for the registration and inspection of all motor vehicles and issue of driving permits and such other matters as are assigned to him by this Act or any Regulations made there under. 2. **Section 11**: *Registration of motor vehicle* 11(1) The Licensing Authority shall cause registers of motor vehicles to be kept in the manner he directs. *3.* **Section 14**: *Customs and Excise Duty on motor vehicles* 14(1) There shall be payable to the Board of Inland Revenue in respect of the classes of motor vehicles specified in the Fourth Schedule, a motor vehicle tax computed in accordance with the provisions of that Schedule. 14(2) Motor vehicle tax shall be payable to the Board of Inland Revenue before registration of the motor vehicle. 14(3) If any motor vehicle in respect of which motor vehicles tax is payable is registered contrary to the provisions of this section, such registration shall be void and of no effect and the motor vehicle shall be deemed not to have been registered. 14(4) The Minister for the time being responsible for finance may by Order amend the Fourth Schedule.	**Section 2**: *Interpretation* "**Licensing Authority**" means the authority appointed in accordance with the provisions of section 4 for the registration and control of motor vehicles.	Ministry of Transport

Belize	The Motor Vehicles and Road Traffic Act, Cap 230 Revised Edition 2000	**Section 3**: *Department of Transport* 3(1) There shall be established under the Ministry for the time being responsible for Transport, a Department of Transport for the registration, licensing and control of all vehicles in Belize, and in it shall be vested the administration of this Act. 3(2) The Department of Transport shall be headed by a public officer to be known as the "commissioner of Transport" who shall be appointed by the Governor general in accordance with section 107 of the Constitution. 3(3) There shall be appointed by the Public Service Commission such other traffic wardens, transport officers, inspectors and other staff as may be necessary for the due carrying out of the provisions of this Act and the regulations made there under.		
Gibraltar	The Traffic Act, 2005	1. **Section 4:** *Licensing Authority* The Licensing Authority for the purpose of this Act shall be a public officer designated from time to time by the Government by notice in the Gazette 2. **Section 14**: *Register of vehicles* 14(1) The licensing authority shall keep a register of all motor vehicles licensed by him under the provisions of this Act.		Licensing Authority, Ministry of Transport

Objects and reasons:- Section 115 contains repeals and savings provisions.

		3. **Section 15**: *Registration* 15(1) On the first issue of a licence under this Act for a motor vehicle, it shall be the duty of the licensing authority to register the vehicle in the prescribed manner without any further application on that behalf by the person taking out the licence and to assign to the vehicle a registration mark indicating the registered number of the vehicle		
Malaysia				Licensing Authority, Ministry of Transport
Hong Kong				Licensing Authority, Ministry of Transport
India	The Motor Vehicles Act, 1988 [Act No 59 of 1988]	Section 40: Application for registration to be made to the registering authority		Registering Authority, Ministry of Transport
United Kingdom				Driver and Vehicle Licensing Agency, Ministry of Transport

FINAL REPORT

ANNEX D

HARMONIZATION OF ROAD SAFETY LAWS AND REGULATIONS

TABLE OF CONTENTS

LIST OF FIGURES

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immunodeficiency's Syndrome
AMREF	African Medical and Research Foundation
ARV	Antiretroviral Drugs
BAC	Blood Alcohol Concentration
COTU	Central Organization for Trade Unions
DRC	Democratic Republic of Congo
DRSC	District Road Safety Committees
EAC	East Africa Community
EARSMP	East African Road Safety Master Plan
EATTFP	East Africa Trade and Transport Facilitation Project
EDPRS	Economic Development and Poverty Reduction Strategy
FHI	Family Health International
GDP	Gross Domestic Product
GNI	Gross National Income
GAS	Ghana Ambulance Service
GoK	Government of Kenya
HIV	Human Immunodeficiency Virus
IOM	International Organization for Migration
KRB	Kenya Roads Board
MAP	Multi-country AIDS Program (World Bank)
M & E	Monitoring and Evaluation
MOWHC	Ministry of Work, Housing and Communications
MOID	Ministry of Infrastructure Development
MoW	Ministry of Works, Dar es Salaam
OECD	Organization for Economic Development
NACC	National AIDS Control Commission
NACP	National AIDS Control Program
NGO's	Non Governmental Organizations
NMMT	Non-Motorized Means of Transport
NMT	Non Motorized Traffic
NRSA	National Road Safety Authority
NRSC	National Road Safety Council/Commission
PEPFAR	President's Emergency Plan for Africa Relief
PIARC	World Road Association
PPP	Public Private Partnership
PSV	Passenger Service Vehicle
RFB	Road Fund Board
RMLF	Road Maintenance Levy Fund
ROADS	Regional Outreach Addressing AIDS through Development Strategies
RSA	Road Safety Audit
RSMS	Road Safety Management System
RTC	Road Traffic Crash (*'Accident'*)
RTI	Road Traffic Injury
TACAIDS	Tanzania Commission for AIDS
TB	Tuberculosis
TRAC	Treatment and Research on AIDS Centre

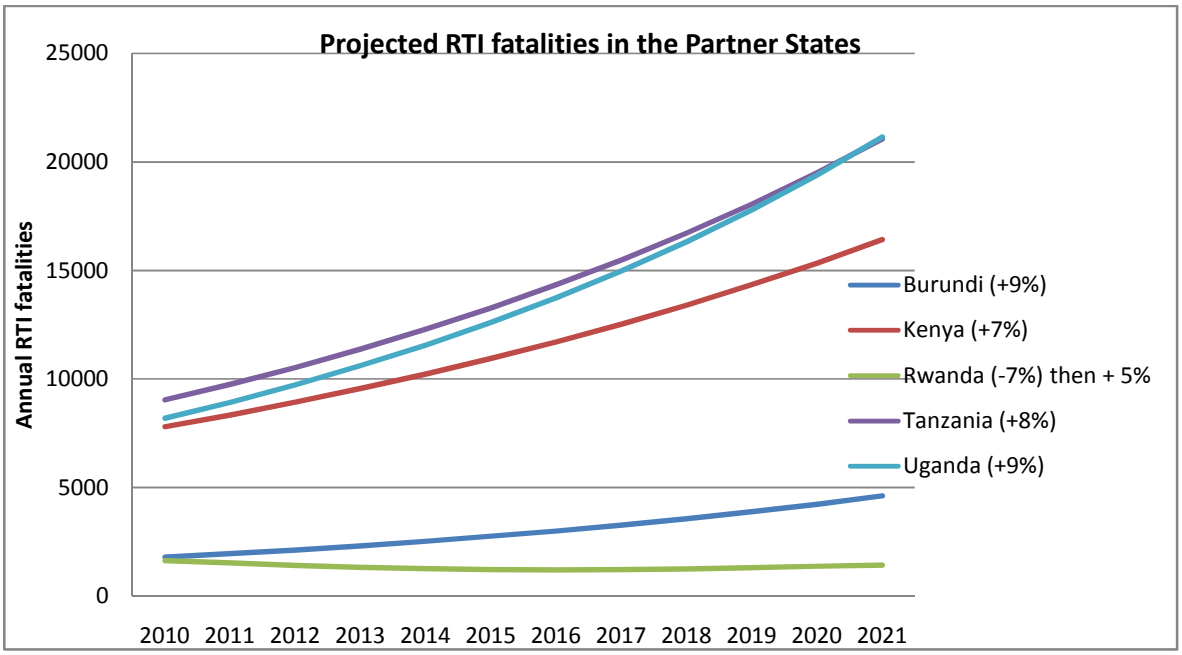
TanRoads	Tanzania National Roads Agency
TCD	Traffic Control Devices
TCIS	Traffic Crashes Information System
ToR	Terms of Reference
SADC -	Southern African Development Community
STI	Sexual Transmitted Infections
SUMATRA	Surface and Marine Transport Regulatory Authority
UNAIDS	United Nations AIDS Programme
URT	United Republic of Tanzania
VCT	Voluntary Counselling and Testing
VETA	Vocational Education Training Authority
VRU	Vulnerable Road User
WB	The World Bank
WHO	World Health Organization
WRRTIP	World Report on Road Traffic Injury Prevention

EXECUTIVE SUMMARY

Road traffic injury and high rates of HIV/AIDS along the road transport corridors constitute a significant loss of human life within the East African Community Partner States. It is a significant obstacle to the achievement of developmental goals of the community. Harmonization of the road safety laws, reduction of risk factors on the Partner States road networks and effective management of HIV/AIDS would facilitate safer transport across the Community and hence the achievement of her developmental goals. This report presents a review of road safety situation and laws, proposes areas for harmonization of road safety laws and identifies strategies, projects and actions to stem the high incidence of road traffic crashes in the Partner States. A regional strategy for tackling prevalence of HIV/AIDS in road transport corridors and a framework for the development of East African Road Safety Master Plan are proposed.

Road Safety Situation

East African countries like the rest of the Sub-Saharan Africa countries have relatively high rates of road traffic injury (RTI) fatalities. About 28,500 people died as a result of RTI in EAC Partner States in the year 2010. Annual increase of road traffic fatalities vary from -7% for Rwanda to about + 9% for Uganda. Projected fatality trend up to 2021 across the Partner States under the business as usual scenario is shown below.



Annual losses due to road traffic crashes were in excess of 1.7 billion US dollars in the year 2007 and are projected to reach 5.0 billion US dollars by the year 2021 under the business as usual scenario. The distribution of fatalities due to road traffic injury across different road user groups is similar across the countries suggesting similar road system risk factors. The factors contributing to the occurrence of road traffic crashes including human, road environment and vehicle factors have similar representation in the traffic crash reports across the Partner States. The human factors, especially carelessness and driving vehicles at an inappropriate speed for the given situation or exceeding a posted speed limit, come out very strongly as a contributing factor to crashes and

therefore enforcement by police and awareness campaigns should be given highest priority. Governments in the Partner States have initiated actions to improve road safety but have not been implemented consistently due to weak coordination inherent in their legal frameworks which assign the role of coordination to an advisory NRSC without adequate capacity. It is recommended to develop an effective road safety management system and invest adequately in interventions to accelerate road safety work so that the increasing trend of RTI fatalities is reversed in the next ten to fifteen years. Governments should designate a lead ministry for road safety work and establish a road safety authority/agency reporting to the lead ministry. The mandate of the road safety agency shall be to provide leadership and coordinate activities within the sub-sector. Initially the priority of the agency shall be to promote road safety as a core government function with aim of creating and sustaining political will without which reversing of the currently increasing loss of human life and property on our roads will remain a dream. The achievement of Rwanda, which is experiencing decline in road traffic injury fatalities, is a testimony to what can be achieved when a government gives priority to road safety.

Road Safety Policies and Laws

The Partner States have policies and comprehensive legislation providing a framework for the provision and maintenance of safe infrastructure as well as for their safe use. Our review of the road safety policies, legislation and the nature and frequency of road traffic crashes and injuries show that there is a great similarity across the Partner States. However, there are some differences which need to be harmonized for smooth transport operations within the trading block. Two Partner States have separate road safety policy document while others include road safety issues within their transport policy document. It was apparent that the writing of a separate road safety policy document allows a more clear identification and addressing of the issues than can be expected in a general transport policy document unless a strategy/action plan for road safety is developed. It is recommended that all Partner States develop a rolling five year road safety strategy to serve as a management tool. Some Partner States have decided to establish semi-autonomous road safety lead agency/authority. This is a highly recommended decision as it provides a legal mandate to the lead agency to coordinate road safety work and overcomes one of the most critical shortcomings in the road safety legal framework since the nineteen seventies. Our review of the legislation suggests that the legislation on road safety interventions especially on speed, blood alcohol content, wearing of seatbelts and helmets need harmonization and should be internationally benchmarked. A summary of legal concerns requiring harmonization are summarized below.

	Issue	**Practice**	**Recommendation**
1	Road safety lead agency	Coordination is weak because of legally weak lead agency	• Legally mandate the Ministry with responsibility for road safety to take the lead and to coordinate road safety work through a National Road Safety Authority/Agency
2	Road safety funding	Inadequate and erratic allocations to road safety work	• Provide for sustainable funding for road safety activities. The fund should be protected legally.
3	Blood alcohol content when driving	• 80 mg to 100 mg of alcohol per 100 ml of blood allowed – this is too high. • Some restrict drivers of	Harmonize permissible BAC as follows: • PSV drivers maximum: 0.00 mg/100 ml of blood • Motorbike riders and young drivers (less than 25 years old) maximum of 20 mg/100 ml of

		PSV to zero alcohol blood content while driving while others do not.	blood • All other drivers maximum 50 mg/100 ml of blood.
4	Speed limits	Speed limits by vehicle class and road type	Legislate maximum speeds as follows: • On dual carriageway: 110 km/hr rural, 60 km/hr urban • On Single paved carriageway: 100 km/hr – rural, 50 km/hr – built–up areas including settlements • Gravel roads: 60 km/hr – rural, 30 km/hr urban • School and residential zones : 30 km/hr • PSV and HGV: 80 km/hr
5	Driver licensing and vehicle inspection	Improperly trained/licensed drivers and poorly maintained vehicles using the public roads	• Harmonize driver training, testing and licensing. Special attention to motorbike drivers/riders • Harmonize the deduction of points, penalties and permit suspension and cancellation system • Harmonize vehicle inspection law and modernize vehicle inspection system
6	Use of Helmets by motorbike and cycle riders	• The law is not comprehensive. • Low wearing rates for hygienic and awareness reasons	• Amend the helmet laws so that every rider and passenger of a cycle (motor and pedal) on a public road be required to wear approved helmet • For health reasons provide for the wearing of smart head cover which is disposable under the helmet. Require the covers to be provided by the riders and disposed of in accordance with environment regulations.
7	Use of mobile phones by drivers while driving	Some states prohibit while others allow the use of mobile phones while driving	• Harmonize legislation: prohibit the use of mobile phones by drivers, riders, cyclists and pedestrians when moving on a public road.
8	Use of ICT in enforcement	The use of ICT in Partner States is very low and the law is not comprehensive	• Legalize the use of cameras for detecting speed limit violation and red-light running.
9	Driving hours	Service hours for intercity PSV are restricted in Tanzania	• Service hours for PSV should be harmonized - allow 24 hours service for intercity buses in all Partner States • Enforcement of driver working hours for PSV should be harmonized (maximum 8 hours within 24 hours as required by labour law)

10	The use of Seatbelts and child restraints	Inconsistent legislation and low wearing rated in Partner States and unavailability of child restraint seats.	• Harmonize legislation: drivers and all passengers are required to wear seat belts. • Introduce legislation for child restraint and take measures to increase availability of child restraint seats.
11	Safety of the road infrastructure	Inconsistencies in design and traffic control. Limited practice of treating hazardous road locations and road safety audit (RSA).	• Harmonize RSA laws – require RSA for proposed and existing roads and traffic management projects. • The law to require Road Authorities to treat hazardous road locations

Strategies, Projects and Actions

On the basis of the road safety situation and identified risk factors strategies designed to improve human behaviour, roadworthiness of vehicles, the road environment, public transport safety, quality and supply and recovery and rehabilitation of crash victims are proposed. Effective road safety work must be based on evidence and understanding of the nature of the problem thus improvement in road safety data management and research are also recommended. The strategies include:

i. Systematic information campaigns, legislation and enforcement
ii. Institutional reform and capacity building for effective road safety management system
iii. Improve road safety data management
iv. Systematic road safety research and regional and international collaboration
v. Driver and vehicle examination and licensing
vi. Road safety education in schools
vii. Improve public transport supply and safety
viii. Improve land use planning and road network management
ix. Improve pre-hospital and hospital trauma management services
x. Improve safety of motorcycle riders and their passengers

Under each strategy, potential projects and actions are listed. The nature of each project and the priorities to some extent will vary between Partner States depending on their stage of institutional reform and previous road safety initiatives among other factors. It will be a challenge to the available professionals to prepare project write-ups and follow through their implementation on the basis of the particular situation in each Partner State.

Tackling Prevalence of HIV/AIDS in Road Transport Corridors

HIV/AIDS is one of the killer diseases that has heavily affected the EAC countries. The spread of this disease in these countries is primarily through unprotected sex between men and women. The economic changes that have been promoted by EAC, since its inception in 1999 have increased the rate of mobility of the population from one border of the Partner State to the other State. Such circumstances have created a suitable condition for the spread of HIV/AIDS from one Partner State to the other. One of the most vulnerable mobile populations is the long distance truck drives working

along the EAC road corridors given the risky sexual behavior they portray and the populations that they interact with.

In order to combat the spread of HIV/AIDS among these States and in particular to help the long distance truck drivers and populations residing along the transport corridors, the EAC has expressed the need for all Partner States to cooperate in having a regional strategy and interventions for prevention and control of HIV/AIDS. We developed a regional strategy to combat the spread of HIV/AIDS along the EAC road corridors. Given that a number of HIV/AIDS interventions have been implemented along the transport corridor our aim was not to come up with parallel structures and interventions but to capitalize on what is already in place and see how that can be further consolidated to provide an effective and efficient mechanism to deal with the epidemic.

A review of various studies and policy documents, interviews with stakeholders and experts in the field confirm that there is need for a regional strategy since each of the Partner States, despite having on-going activities to curb the HIV spread, there are still opportunities for improvement and harmonization. The document thus presents key areas of the strategy based on our analysis of the findings. The key areas/actions identified are:

i. Ensuring accessibility of health services including availability of comprehensive TB/HIV/AIDS/STI services. This is to be achieved by scaling up access, prevention, treatment, care and support of TB/STI/HIV/AIDS services and providing comprehensive TB/STI/HIV/AIDS services. This entails, among other things, coming up with a minimum standard package for HIV/AIDS interventions to be used by all partners working along the transport corridor.

ii. Mainstreaming of HIV/AIDS interventions along the transport corridor into local development plans in the respective countries to ensure sustainability and ownership of the interventions by local communities.

iii. To facilitate effective implementation of the interventions along the transport corridor there is need for harmonization of key policies and protocols among the Partner States. So far a number of key policies and protocols have already been harmonized but there still remains some key protocols that are critical and need to be worked on, a case in point is the treatment of STI which is of central importance in addressing the epidemic given the relationship between STI and HIV

iv. It is recommended that an evidence-based behaviour and social change communication strategy should be implemented with appropriate communication messages and materials that are linguistically and culturally appropriate and harmonized across the Partner States.

v. All countries should strive to have their responsible Transport Ministries design and implement HIV/AIDS sector policy/response. The policy is of uttermost importance in providing guidelines and direction of the process of dealing with HIV/AIDS in the transport sector. It will also provide a framework which the transport sector employers and employees will use to formulate HIV/AIDS programs at their workplace.

vi. It is recommended that in addition to the provision of comprehensive TB/STI/HIV/AIDS services partners working in the transport corridor should work with local communities to improve not only income levels, but also skills and capacities to enable the local communities make independent sexual choices. The aim should be to focus on mainstreaming the economic empowerment model into HIV and AIDS local, national and regional agendas.

vii. Given the presence of multiple development partners, national and international organizations working on HIV and AIDS along East African Community transport corridors there is need to provide an institutional framework that will facilitate coordination, information sharing and building synergy among programmes so as to have greater impact on the efforts done to mitigate HIV and AIDS along the transport corridors. It is also important to work on the recommendations of the Partners States of 2008 which proposed for the establishment of regional coordination mechanisms including a multi-sectoral partnership on HIV and MARPs in East Africa which will involve National AIDS Commissions, national and regional stakeholders as well as international collaborating partners.

viii. It is of uttermost importance that EAC countries at the national level are committed and give due importance to the role road transport corridors play in fuelling the HIV/AIDS epidemic. This needs to be demonstrated by committing to agreed strategy and committing resources that would be needed to implement the strategy.

ix. Lack of adequate comprehensive data that is comparable across the 5 countries is a major challenge to effective planning for provision of HIV services along the transport corridor. To enable monitoring of progress made, it is important to develop an M& E system that would systematically collect information on HIV interventions carried along major routes in all EAC countries. GLIA has developed an M&E framework that can be used in capturing progress made and this would be the most effective approach since all Partner States have been using this monitoring framework for some time now.

x. All Partner States have developed National Strategic Plans as the framework for implementing a multi-sectoral response to HIV and AIDS. In this respect, the EAC Road Transport Strategy for HIV/AIDS will compliment efforts undertaken by individual countries and should not be perceived as something new or out of line with what was set to be achieved in their National Plans. Each Partner State should mobilize resources targeting MARPs along transport corridors in their respective countries and also there should be joint efforts to access funding available from Global Fund, PEPFAR, MAP (World Bank) and other bilateral and multilateral development partners.

xi. Public-private partnership are needed since no single sector be it the for profit private sector, the not for profit private sector or the government agencies of the public sector has all the skills and resources needed to make impact on its own.

xii. Capacity building should focus on enhancing the understanding of the interrelationship between HIV/AIDS and the transport sector at national levels and at the local implementation levels. Capacity building should also be fostered at local levels by building the capacity of local governments, civil society organizations and private sector to ensure effective and harmonized responses. This should also be extended to building the capacity of the Ministries of Transport to address the HIV needs affecting the transport sector and to facilitate the operationalization of sectoral HIV/AIDS strategic plans.

A Framework for the Development of East African Road Safety Master Plan

Institutional arrangements in Partner States as in other countries are such that road safety activities take place in government departments/ agencies in a number of ministries. Appointment of a legally mandated lead agency with authority to provide strong leadership in national policy issues including setting of national targets, coordination, sufficient funds and their allocation is a pre-requisite for progress. Kenya, Tanzania and Uganda have proposals for creating a body corporate for coordinating road safety work. The lead agency must carry out or provide leadership over the seven management functions necessary to produce the required level of safety in a multi-sector participation. These functions include: results focus (policy and strategy), coordination, legislation, promotion, sustainable funding and resource allocation, monitoring and evaluation, research and knowledge transfer.

In this framework we propose adoption of a long term vision and a short term vision by all Partner States as follows:

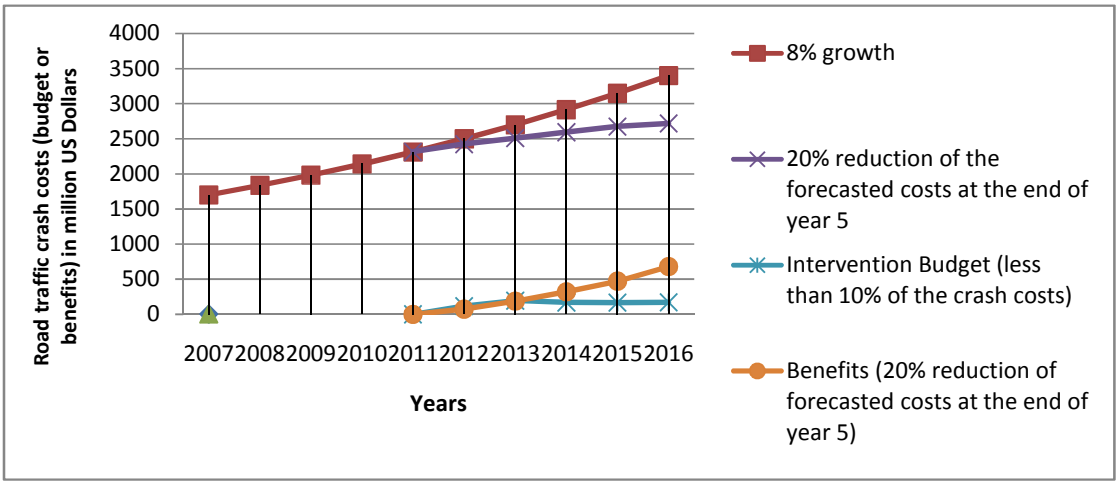
> The long term objective or vision is ***a road transport system with a negligible probability of being killed or seriously injured as a result of a road traffic crash.***

> The goal or vision of the road safety plan for the first decade is for each Partner State ***to half the number of fatalities and serious injuries in 2022 compared to the number projected for that year on the basis of 2010 data.*** *This means achieving the target envisioned by the UN Decade for Road Safety Action.*

We propose a fifteen years planning horizon broken into five year phases namely the foundation phase, growth phase and consolidation phase.

We propose that in the first five years – the foundation phase – the focus be on the establishment of a basic but effective road safety management system (RSMS) and on achieving tangible results through targeted information campaigns, enforcement, recovery and rehabilitation of crash victims and infrastructure safety improvement projects along high crash routes and cities. The proposed target for the first five years is to reduce the projected road traffic injury fatalities by 20 percent. The budget, reduction in crash costs (benefits) are shown in the table below and visualized in the accompanying figure. The benefit/cost ratio for the foundation phase is just over two.

Partner State	Burundi	Kenya	Rwanda	Tanzania - Mainland	Tanzania - Zanzibar	Uganda	EAC Secretariat	Total
Budget in million US Dollars	60	205	50	250	10	230	5	810
Fatalities to be prevented in the year 2022	1,700	7,000	1,500	8,700	250	8,000	NA	27,150



The next five years – the growth phase – is to extend the implementation of all the strategies on road network carrying 80 percent of the national traffic to reduce the projected RTI fatalities by 50 percent. The budget for the entire Community should be 1.3 to 1.6 billion US dollars based on the experience and capacity developed in the first five years.

The last five years – the consolidation phase – the interventions will be extended to the entire network and the RSMS improved on the basis of the results of monitoring and evaluation. The national target set will depend on the level of ambition generated in the first two phases and should be devolved to the local level. However, each Partner State should strive to continuously have fewer RTI fatalities each succeeding year.

It is recommended that monitoring and evaluation of the programme be given a high priority. To aid the M&E process a checklist to assess progress on the development of the institutional management functions and the implementation of interventions is attached to the report.

1 INTRODUCTION

1.1 Background

This working paper aims at addressing objective 3.4 “Harmonization of Road Safety Regulations” of the Transport Facilitation Component of the EATTFP which involves the implementation of the Tripartite Agreement on Road Transport signed by the EAC Partner States in 2001 and ratified in 2004. The EAC in the year 2001 comprised of Kenya, Tanzania and Uganda. Rwanda and Burundi have become Partner States of the EAC effective July 2007.

The objective to harmonize road safety regulations mentioned above under the ToR includes the following components:

i. Review of existing laws and regulations concerning road safety and propose areas for harmonization,
ii. Identify viable strategies, projects and activities leading to the stemming of the high incidence of accidents in the region,
iii. Recommend a regional strategy for tackling prevalence of HIV/Aids in road transport corridors, and
iv. Develop a framework for the preparation of an East African Road Safety Master Plan.

This report addresses all the items above.

EAC is part of Sub-Saharan Africa which, alongside the WHO Eastern Mediterranean region, has the highest road traffic injury mortality rate (32.2 fatalities per 100,000 population) despite its much lower motorization level (WHO, 2009). The region has a very poor road safety data system and therefore a limited understanding of the impact of the RTI problem on the growth of her economy. The EATTFP, and especially its road safety component, is timely. The implementation of the project is critical to the achievement of the EAC developmental goals.

1.2 Objectives

The objectives of the study to harmonise road safety laws and regulations were:

- Review of existing laws and regulations concerning road safety and propose areas for harmonisation,
- Identify viable strategies, projects and activities leading to the stemming of the high incidence of accidents in the region,
- Recommend a regional strategy for tackling prevalence of HIV/Aids in road transport corridors, and
- Develop a framework for the preparation of an East African Road Safety Master Plan.

1.3 Methods

To achieve the objectives and get consensus among the Partner States the following approach was adopted.

- A desk study, where policy documents, country strategies, accident data on road safety were collected and reviewed. The areas reviewed included road safety situation, accident risk factors, institutional setup and capacity for road safety actions in the Partner States.Also international literature were reviewed.

- Interviews through which information on current sector performance was gathered from experts and stakeholders in the sector.
- To consolidate the information we conducted stakeholders' and experts' workshops in each of the 5 Partner States and Zanzibar. The stake holders ranged from sector ministries and local government authorities to transport service providers and other beneficiaries. The working recommendations were presented and the experts and stakeholders had opportunity to criticize and provide inputs to the study.
- The draft working papers presented at the experts' workshops were revised and presented at the Task Force Meeting in Dar es Salaam during September 2011. The Task Force provided further criticism and inputs.
- Preparation of Draft Final Report which consolidated findings from the above process. The Draft Final Report was presented and discussed by the Mwanza Task Force Meeting (May, 2012) composed of representatives from all Partner States.
- Recommendations from the Mwanza Meeting were used to prepare the Final Report.

Thus the consensus building process outline above has enabled us to produce this report to the expectations of all parties.

1.4 The Structure of the Report

Following this introduction and a thorough analysis of the existing road safety situation including the risk factors, system risk, organization of road safety work and recent initiates across the Partner States presented in Chapter Two the report is structured according to the tasks outlined in the ToR namely:

i. A review of existing laws and regulations concerning road safety and proposed areas for harmonization in Chapter Three,

ii. Proposed road safety strategies, projects and activities presented in Chapter Four,

iii. Recommended regional strategy for tackling prevalence of HIV/AIDS in road transport corridors in Chapter Five and a

iv. Proposed framework for the preparation of an East African Road Safety Master Plan in Chapter 6.

The appendices provide details on the cost of implementing the strategies and a tool for M&E.

2 ROAD SAFETY SITUATION ANALYSIS

2.1 International Context

2.1.1 General

With more than 1.3 million people killed due to road traffic injuries (RTI) annually with 50 million more sustaining injuries some of them resulting in permanent disabilities, RTI is a global pandemic. RTI is the second leading cause of death for young people (between 5 to 29 years of age). Young men are three times more likely than females to be killed due to RTI (Peden et al, 2004). Developing countries which recently entered a phase of rapid motorisation of road traffic experience a disproportional share of global fatalities due to RTI with 90% of global fatalities occurring in low and middle income countries (ESCAP, 2009).

Sub-Saharan Africa with only 6% of world vehicle population experience 11% of world RTI fatalities. The highly motorised countries together have 60% of world vehicles experience 14% of RTI fatalities (PIARC, 2003). RTI can be prevented and the consequences of the injuries minimized through appropriate interventions. Over the past three decades the highly motorised countries have experienced reduction in the number of fatalities due to RTI while the situation has worsened in Sub-Saharan Africa and the rest of low and middle income countries.

Economic loss due to RTI and property damage is in the range of 1 to 3 percent of gross national income (GNI) (WHO, 2009). The heavy loss of human life and other resources due to road traffic crashes (RTC) is a motivation for governments to invest in appropriate preventive measures to improve road safety situation of their countries.

2.1.2 International Organizations and Best Practice Countries' Literature Overview

International organizations including the World Health Organization (WHO) and the World Bank (WB) among others have published information that can inspire and guide middle and low income countries to achieve significant improvement in their road safety status. Some of the international documents reviewed apart from pertinent papers included:

i. The World Report on Road Traffic Injury Prevention (Peden et al, 2004),
ii. Road Safety Management (SafetyNet, 2009),
iii. Towards Zero: Ambitious Road Safety Targets and the Safe System Approach (OECD / ITF, 2008),
iv. Implementing the recommendations of The World Report on Road Traffic Injury Prevention: Country guidelines for the conduct of road safety management capacity reviews and the related specification of lead agency reforms, investment strategies and safety programs and projects. (Bliss and Breen, 2008), WB.
v. Road Safety Manual (PIARC, 2003)

It is apparent in the international literature that a progressive shift in road safety management practices has moved from focus on the driver interventions in 1950s to 1960s, to focus on system-wide interventions (using the Haddon safety measures approach) in the 1970s and 1980s. This framework considered the road user not only in the pre-crash phase but also the crash phase and post crash care. It emphasized the need to effectively manage the kinetic energy exchange during collision to ensure that the thresholds of human tolerance are not exceeded. By the 1990s the focus had shifted to integrated, targeted programs with interventions applied system wide and based on institutional leadership, monitoring and evaluation. At about the same time the leading countries re-

defined the level of ambition and set a goal to make the road traffic system intrinsically safe and extended their system approach to include the institutional management functions elaborated below. This has been referred to as *vision zero* or *safe system approach* and aims at preventing death or serious injury as a result of a RTC. This approach changes the way we think about road safety and the way we set targets and outputs. It is the recommended approach for all countries regardless of their current road safety situation or institutional set-up.

The World Report on Road Traffic Injury Prevention published by the WHO (Peden et al, 2004) gives the following recommendations as guidance for effective road safety work at national level:

i. Identify a lead agency in government to guide the national road safety effort,
ii. Assess the problem, policies and institutional settings related to road traffic injury and the capacity for road traffic injury prevention in the country,
iii. Prepare a national road safety strategy and plan of action,
iv. Allocate financial and human resources to address the problem,
v. Implement specific actions to prevent road traffic crashes, minimize injuries and their consequences and evaluate the impact of these actions, and
vi. Support the development of national capacity and international cooperation.

Successful road safety management is based on consideration of all elements of the system and the linkages between them. The foundation for road safety management system is the seven institutional management functions which are described in Bliss and Breen (2009). The institutional functions produce the interventions to achieve the desired long term goal and intermediate targets. The functions are delivered by government departments / agencies responsible for producing respective interventions, sometimes in partnership with civil and business entities. The seven institutional management functions are:

i. Results focus
ii. Coordination
iii. Legislation
iv. Funding and resource allocation
v. Promotion
vi. Monitoring and evaluation
vii. Research, development and knowledge transfer

These functions are elaborated in Chapter Six where they are adapted into the framework for the development of an East African Road Safety Master Plan (EARSMP).

2.1.3 The Road Safety Situation in the Sub-Saharan Africa

According to WHO (2009) few African countries have prioritized investment in road safety – half the countries do not have a national road safety strategy and only one in four have set targets and provide funding to the lead agency to work towards these set targets. Availability and quality of road safety data is poor. It was estimated that the road traffic fatality rate in 2007 was 32.2 per 100,000 population which puts the region on the top of the list of WHO's world regions ranking despite its low motorization rate. The risk of vulnerable road user (VRU) involvement in traffic crashes in the region is very high and almost nothing is being done on the ground to provide for their mobility and safety needs.

2.2 Road Safety Situation in EAC Partner States

2.2.1 Extent and Trend of Road Traffic Fatalities and Injuries

Across the EAC Partner States during the year 2007 there were 8,699 and 45,712 fatalities and injuries respectively due to RTCs reported to the police (except for Burundi where their information is from the ministry responsible for health). The total population was around 127,108,000 and was distributed across the Partner States as shown in Figure 1. RTC fatalities in the Partner States were defined as shown in Table 1, which implies that reported fatalities for Kenya are not comparable to the other Partner States if their reporting comply with their legal definition of RTI fatality. Table **2** provides a more realistic number of RTI fatalities. The total number of persons killed as a result of RTI in all Partner States in the year 2010 were 28, 446. The number of RTI is more than five times the fatalities. The road traffic system risk of the countries expressed in terms of fatalities reported to the police per 10,000 registered vehicles is shown in Figure 2. The figure shows that Kenya's road traffic system risk is lower than that of Rwanda, Uganda and Tanzania. However, given the fact that their data include those dying on the spot their situation could be worse. The data for Burundi is considered un-comparable to the other Partner States and the actual road safety situation is worse than suggested by the data. Figure 3 presents vehicles per 1,000 population which explains in part Kenya's lower system risk.

Table 1: Definition of RTI fatality across Partner States*

Country		**Definition**	**Data source**
Burundi		Defined as died any time after the crash	Health
Kenya		Defined as died at the crash scene	Police
Rwanda		Defined as died within 30 days of the crash	Police
Uganda		Defined as died within 30 days of the crash	Police
Tanzania	Mainland	Defined as died within 30 days of the crash	Police
	Zanzibar	Defined as died within 24 hours of the crash	

Source: Extracted from the legislation and as reported by Experts to WHO (2009) (African region report) and to the Consultants

*Compliance with the official definition is doubtful for the case of Rwanda, Uganda and Tanzania Mainland since a RTI victim dying a few days after the crash is unlikely to be entered into the police statistical reports.

Table 2: Number of RTI fatalities in Partner States according to reports of causes of death

Partner State	Number of fatalities	Rate per 100,000 population	Ranking of RTI as a cause of death
Burundi	1,786	29.5	13th
Kenya	7,801	28.2	10th
Rwanda	1,638	24.2	15th
Tanzania	9,029	29.6	12th
Uganda	8,192	34.7	12th

Source: World Life expectancy (www.worldlifeexpectancy.com) based on WHO data and other organizations and research. Based on reports on causes of death in the Partner tates rather than the police traffic crashes data due to known under-reporting.

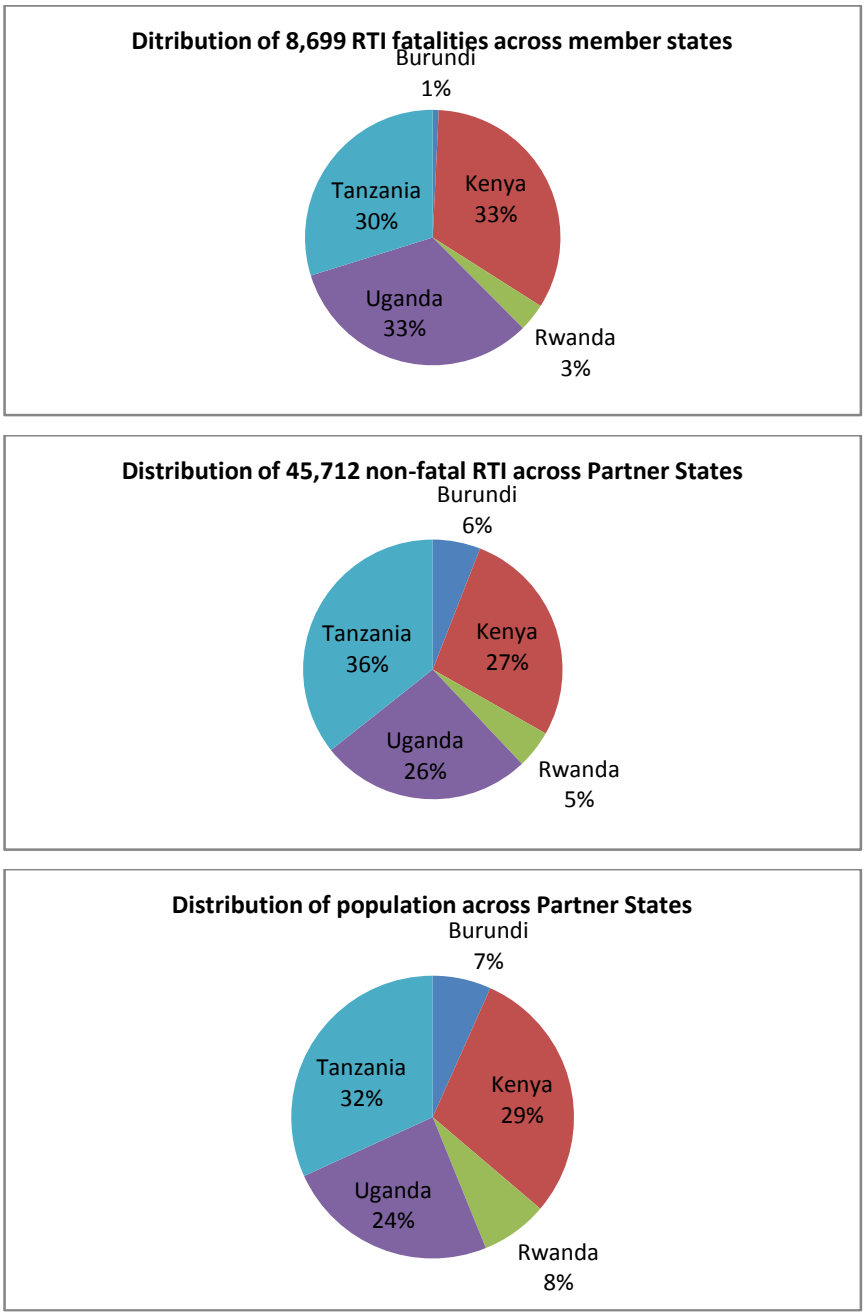


Figure 1: Distribution of RTC casualties and population across Partner States

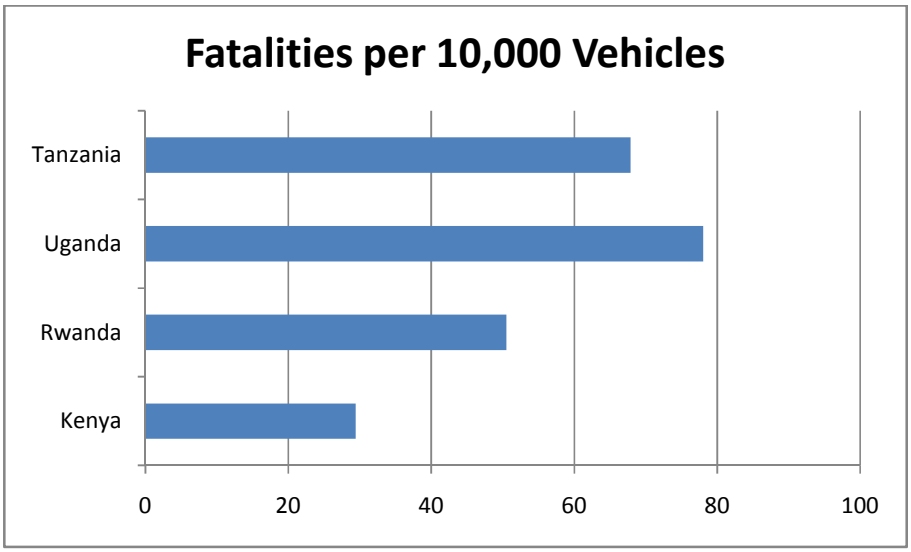


Figure 2: Road traffic system risk expressed in fatalities reported to the police per 10,000 registered vehicles

Source: Based on police RTI fatalities data

The trend for RTI fatalities (see Table 3) is generally increasing for all Partner States with the exception of Rwanda (data on trend was not available for Burundi). This, unfortunately, is the case for many countries experiencing rapid motorization without accompanying road safety interventions to ensure safety of road users. The estimate of fatalities per 100,000 population presented in

Figure 4 suggest that the condition in Uganda is comparatively serious. The rapid increase in RTI fatalities in Uganda in recent years (see

Table 3) calls for serious action. Based on Table 2 and

Table 3 data, Figure 5 presents a conservative scenario of the number of RTI fatalities in the Partner States if the current rate of economic growth and registration of motor vehicles prevails without corresponding implementation of road safety interventions.

Table 3: Trends in RTI fatalities across Partner States

Country		Trend of RTI fatalities
Burundi		Data not available (estimated at about 8 percent)
Kenya		Generally increasing at about 7 percent per year (experienced a reduction of 20 percent in the year 2004 / 2005 following introduction of new regulations for PSV)
Rwanda		Increasing up 1997/99 then a generally downward trend: decreased by 7 percent per year from 2002 to 2005
Uganda		Increased at about 20 percent per year from 2008 to 2010. Generally the increase is in the range 8 to 9 percent each year
Tanzania	Mainland	Increasing at about 8 percent per year (for the last 10 years)
	Zanzibar	Increasing at about 7 percent annually from 2002 to 2007

Source: Based on Traffic Police Departments' data and other reports

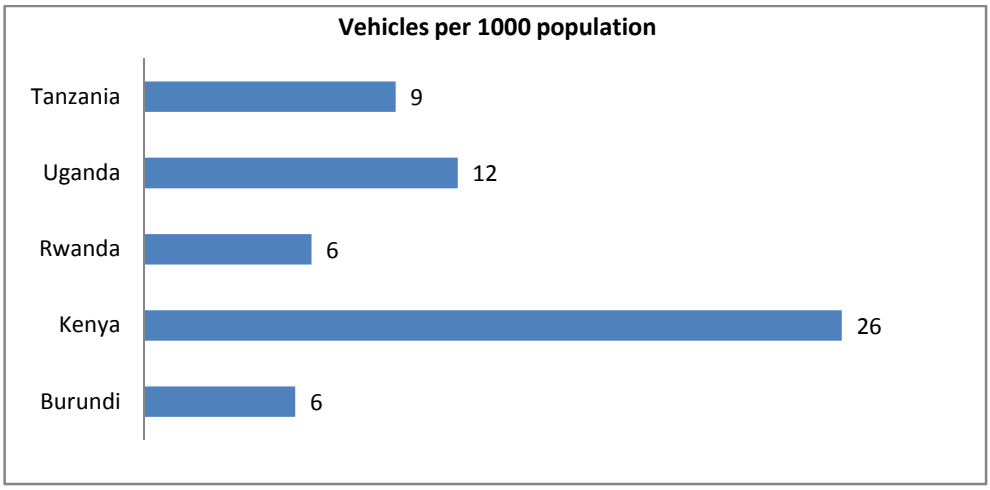


Figure 3: Vehicles per 1,000 population across Partner States

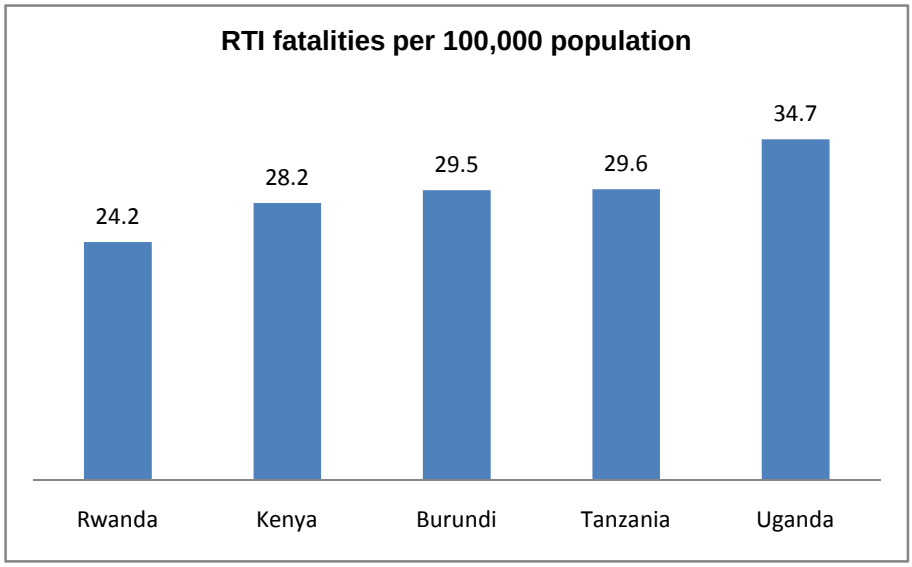


Figure 4: Fatalities due to RTC per 100,000 population across Partner States

Source: World Life expectancy (www.worldlifeexpectancy.com)

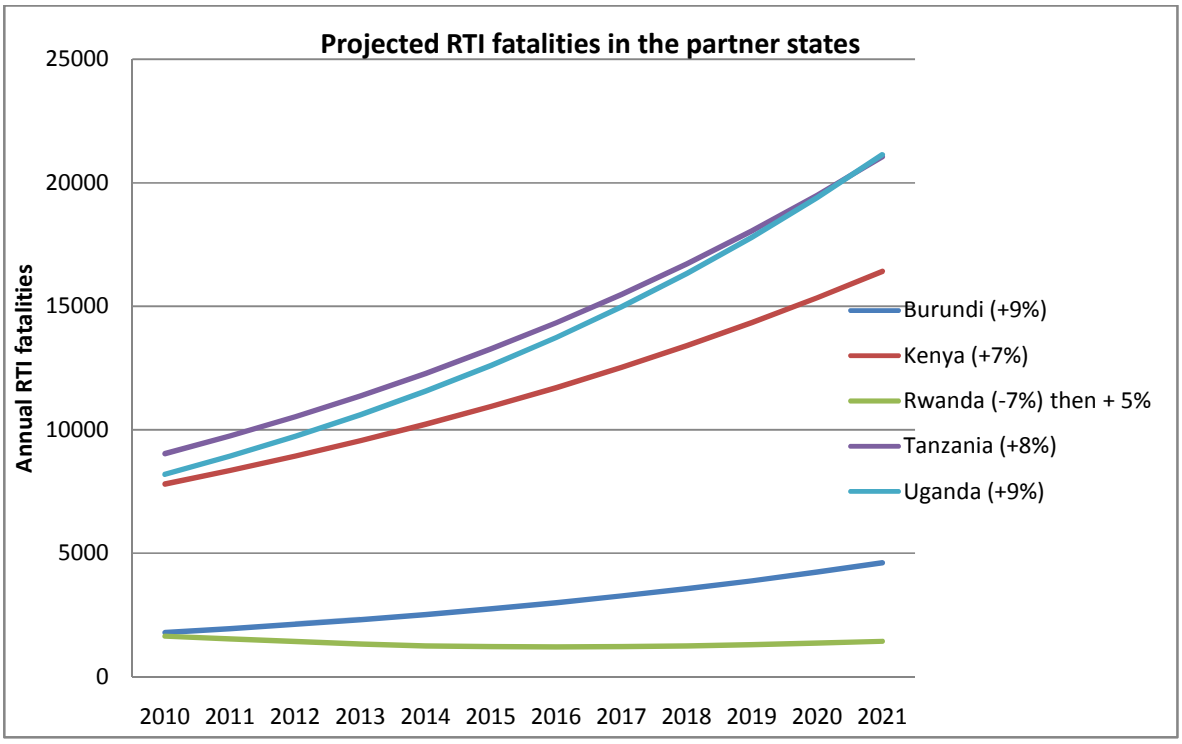


Figure 5: Conservative projection of the increase of RTI fatalities in the EAC Partner States

2.2.2 Nature of the Problem

It is important to identify the road users involved in RTC and the rate of fatalities in order to determine the priority areas. Analysis by Odero et al (2003) revealed that distribution of fatalities by road user category in Kenya remained fairly stable from 1971 to 1990. About 40 percent of RTI fatalities were pedestrians, 40% were passengers 14 percent drivers and about 6% cyclists. Pedestrians were more often killed in urban areas whereas passengers were the majority of casualties from traffic crashes on rural highways.

Macharia et al (2009) reported that 81.2% of RTI victims were aged 15-49 years while 12% were above 49 years. About 20% of the interviewed RTI inpatients were able to pay bills. This suggested an over-representation of lower income strata with limited access to effective medical treatment (lack of medical insurance and personal resources to draw from to pay medical bills). Macharia et al (2009) reported that provision of first aid was very weak (only 16% of interviewed inpatients reported having received first aid). Transport to hospital is mainly by volunteers while police and ambulances transported 7.5 percent of the inpatients interviewed. Sixty six percent of victims were treated within one hour of the crash. Services rated as fair to poor by about 60%. Essential supplies were often missing in public hospitals though 40% of all hospitals self reported to be prepared to handle RTI emergencies. For the severe injury (treated as inpatients) 78% suffered from permanent disability.

The distribution of fatalities by road user group across Partner States (years 2006 to 2007) is shown in Figure 6 while that of vehicles for the corresponding time is presented in Figure 7. Generally the proportion of pedestrians and passengers killed in all countries is high ranging from 70 percent for Tanzania to 80 percent for Kenya. The figures are in agreement with those given by Odero et al (2003). For Rwanda the proportion of passengers and pedestrians is 52 percent which is due to the high proportion of motorcyclists and cyclist (total of 34 percent). The general conclusion is that road safety work need to focus on improving safety of passengers (mainly in PSVs) and the vulnerable

road users. On many parts of the road network segregation of modes is not common and pedestrians, pedal-cyclists, motor-cyclists, buses, trucks and passenger cars compete for road space creating serious safety problems especially for the vulnerable users.

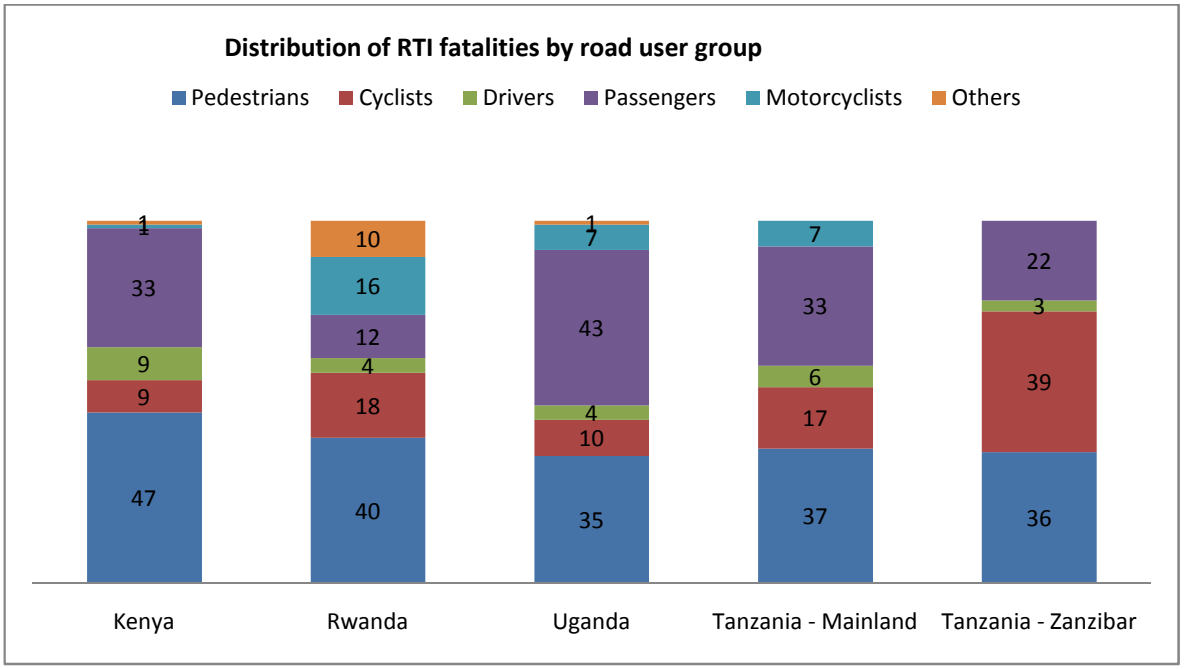


Figure 6: Distribution of RTC fatalities by road user categories across Partner States

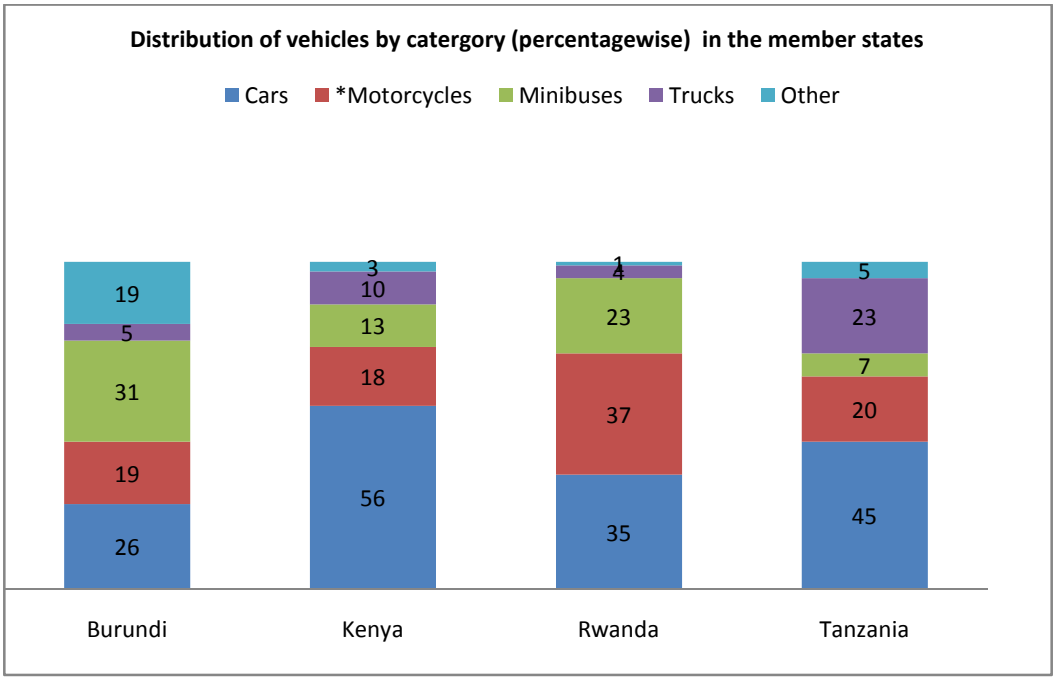


Figure 7: Distribution of vehicles by category across Partner States

*Includes three wheeled motorized vehicles

2.2.3 Contributing Factors

Factors contributing to the occurrence of RTC in the Partner States according to the police records are human factors which contribute over 80 percent, road and environment factors which account for less than ten percent and vehicle defects also accounting for less than ten percent. Figure 8 presents what the police force reported as causes of traffic crashes in Rwanda for the years 2002 through 2005 to serve as an illustration as the situation in Partner States does not differ much. Since the main purpose of the data collection by the police is to apportion blame their focus is on human factors especially those factors related with the violation of the law. For the purpose of developing a holistic management of RTI it is necessary to identify risk factors beyond those indicated by the police. Section 2.3 below explores the risk factors in the Partner States by augmenting the police data with the findings of researchers in the region and beyond.

2.2.4 Impact of RTI

The impact of RTC on the Partner State economies, the household and individual is significant. According to international and local studies economies of developing countries lose up to three percent of their GNI due to RTC (considering human capital loss as well as property loss, administrative and treatment costs). This amounts to more than 1.7 billion US dollars (for year 2006/2007) for the five Partner States. The RTC thus has a serious economic impact on the economies. As it can be seen in Table 4, costs of RTC are not studied regularly across Partner States. Because governments are not regularly evaluating the economic loss due to RTCs the motivation to implement interventions aimed at the reduction of RTI is low. There have been short lived actions to deal with the problem when a crash claiming many lives occurs. However, to have a firm economic basis for sustainable investment in road safety action by governments and project economic analysis, we recommend regular RTC cost study for each Partner State.

At the household level when the single bread earner dies in a crash or suffers permanent disability the impact can plunge the family into poverty as very few road users has sufficient insurance, if any, to allow them recover financially. There are psychological suffering and the added costs of caring for an impaired family member which sometimes involve one family member's full attention. The proportion of seriously injured who suffer from permanent disability is as high as 78 percent as reported for Kenya by Macharia et al (2009) which is comparable to the experience in Tanzania (SUMATRA, 2007). Thus the impact of road traffic crashes on the community is much more than what is indicated by the economic loss. The benefits that can be obtained by consistent road safety action can be several times more than the economic benefits and a government that value the quality of life of her people should do everything within its means to control the pandemic.

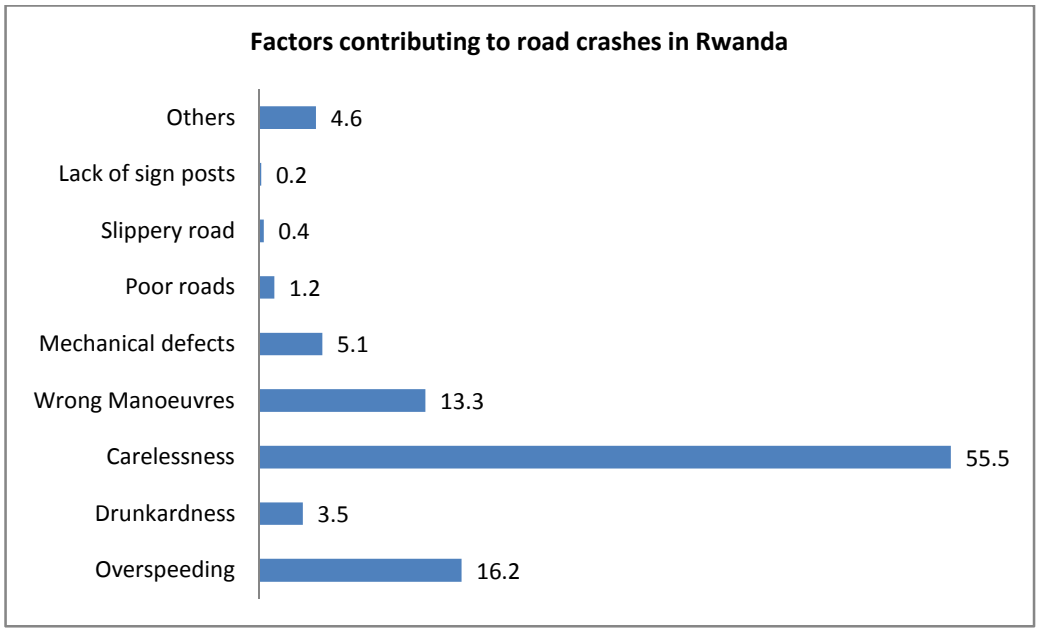


Figure 8: RTC contributing factors - Rwanda

Table 4: Estimates of RTC costs across Partner States

Country		Availability of RTC cost study	Estimated RTC costs (US $ million	Estimated costs - based on 3% of GNI (US $ million)
Burundi		No study available	NA	28
Kenya		No study available. However, GoK (2009) gives an estimate of loses (excluding life).	50	765
Rwanda		No study available	NA	93
Uganda		Study available on costs of fatality and injury	200	315
Tanzania	Mainland	Yes (latest study was based on data for the year 2006 (quoted in URT, 2009)	446	485
	Zanzibar	Reported in NRSMP (2004)		14
EAC		Total for the five Partner States in the year 2007	NA	1,700
		Projected total for the five Partner States in the year 2016		3,400
		Projected total for the five Partner States in the year 2021		5,000

Source: Various (indicated in the Table)

2.3 Risk Factors and Proposed Measures

This section presents the risk factors for road traffic injuries in the Partner States and proposes measures to reduce the risk. The risk factors were identified by reviewing existing situation reported by researchers, Partner State documents, interview of experts and stakeholders' feedback from experts' and stakeholders' meetings held in the Partner States, WHO's 2008 survey of road safety situation in the African region (WHO, 2009) and The World Report on Road Traffic Injury Prevention (WRRTIP) (Peden et al 2004). This approach to some extent overcame the setbacks due to inadequacies in the road safety database of the Partner States indicated above.

2.3.1 Driving Under Influence of Alcohol and Drugs

The risk of a driver being involved in a traffic crash is related to blood alcohol concentration (BAC) and is known to start to increase significantly at BAC of 0.04 g/dL (40 mg/100 millilitres of blood) (Peden et al 2004). Yet for Rwanda, Tanzania and Uganda the legislated BAC is 0.08 g/dL (80 mg/100 millilitres of blood) and the limit for Burundi is 100mg/100 milliliters of blood. In Tanzania Mainland drivers of PSV are not allowed to have any alcohol in their blood when on duty while for Zanzibar all drivers are not allowed any amount of alcohol in their blood. The World Report on Road Traffic Injury Prevention (WRRTIP) (Peden et al 2004) recommended BAC limit of 0.05 g/dL (50 mg/100 millilitres) for general driving population and 0.02 g/dL (20 mg/100 millilitres of blood) for young drivers and motorcycle riders. This is the value we recommend the Partner States to adopt.

Reported BAC as a contributing factor in all Partner States is very low although it is acknowledged to be a significant contributing factor to crashes occurring in the night and weekends. Generally enforcement of the permissible BAC limits for the driving population is low in Kenya, Tanzania (both parts) and Uganda. Awareness of effect of drugs causing drowsiness is also low among commercial drivers. Amendment of the law, awareness campaigns and systematic enforcement is therefore necessary.

Measures

i. Amend legislation in all Partner States so that the BAC limits are as follows: 0.05 g/dL (50 mg/100 millilitres) for general driving population, 0.02 g/dL (20 mg/100 millilitres of blood) for motorcycle riders and young drivers and 0.00 g/dL (0.00 mg/100 millilitres) for drivers of PSV,
ii. Carry out systematic and sustained information campaigns coupled with enforcement of the new BAC limits, and
iii. Carry out information campaign on drugs to be avoided when driving (encourage the reading of labels on medicines and to seek medical advice on whether it is permissible to drive when on medication).

2.3.2 Speed

Management of speed is the single most effective factor in prevention of road traffic crash occurrence and the reduction of RTI severity when a crash occurs. Introduction and effective enforcement of appropriate speed limits in rural and urban areas has the potential of minimizing loss of life of passengers and pedestrians who make up the bulk of those killed due to crashes in the Partner States. Apart from the general speed limits for rural and urban areas, site specific speed limits need to be introduced and enforced where this is necessary.

There is also a need to harmonize permissible maximum speed on rural roads. Current speed limits are as shown in Table 5. The law in Uganda specifies different maximum speed for different vehicle categories on gravel and paved roads.

Table 5: Speed limits in Partner States

Country	Rural speed limit – Km/hr	Urban/settlements speed limit km/hr
Burundi	90	60
Kenya	100	50
Rwanda	55	35
Uganda	100	50
Tanzania	80*	50

*PSV and heavy goods vehicles only

Systematic and sustained enforcement of speed limits is essential to ensure a high perceived probability of apprehension of offenders without which speed limits tend to be ignored. This has been achieved in Rwanda and generally poor in all other Partner States.

Measures

i. We propose a general rural maximum speed limit of 100 km/hr and urban speed limit of 50 km/hr should be adopted on single carriageway roads. For dual carriageway roads rural speed limit is 110 km/hr and 60 Km/hr for urban roads. Partner States should be encouraged to adopt lower speeds consistent with the design standards of their roads and land uses in urban areas, and

ii. Enforcement of speed limits should be done systematically to ensure a high probability of offenders. Use of ICT to overcome the inconsistencies in enforcement of speed limits by human agents.

2.3.3 The Road Infrastructure

The planning, construction and maintenance of rural and urban roads has significant contribution to the occurrence of traffic crashes even though this factor is usually under-reported in traffic police records. Improvements in road layout of sections of roads or junctions in some countries have shown reductions in crash occurrence as much as 30 percent as opposed to less than ten percent suggested by traffic police reports in the Partner States. Systematic and comprehensive programmes to identify and treat hazardous road locations have not been undertaken by the Partner States although some spots have been treated. Road safety audit (RSA) of new roads is not yet fully established as a practice for new road construction projects. However, RSA is required by the law for the case of Tanzania. Guidelines for road safety audit have been published and professional training is being offered.

Available information and limited survey show that the following road infrastructure deficiencies exist:

i. Improper road layout both at links and junctions,

ii. Inadequate maintenance,
iii. Inadequate street lighting in urban areas,
iv. Lack of traffic control devices (TCD) at critical locations,
v. Faulty operation, unwarranted installation or failure of traffic signals,
vi. Inadequate provision for pedestrians at traffic signals,
vii. Inadequate shoulder width for use by non-motorized traffic (NMT) and disabled vehicles,
viii. Inappropriate installation of traffic calming measures,
ix. Inappropriate and inadequate road crossing facilities for pedestrians,
x. Encroachment of NMT space by motorized transport,
xi. The needs of motorcycles not yet provided for in spite of the growing use,
xii. Inadequate bus stop design and inappropriate location, and
xiii. Inadequate road junction capacities especially in major urban areas.

These deficiencies in the road infrastructure are a result of lack of established guidelines, operational procedures and manuals specifying standards for the facilities and warrants for TCD or calming measure installation etc. RSA practice is not yet universally adopted and monitoring and evaluation of road agencies for their compliance is lacking.

Measures

The following actions are recommended to the Partner States:

i. Take measures to establish the practice of RSA for new and existing roads including the monitoring and evaluation of the practice.
ii. Ministries responsible for infrastructure and road fund boards (RFB) should provide guidance and promote good practices that provide for the safety of all road users and require their road agencies to adopt them. These should be made part of their annual performance agreements with the respective ministry and RFB.
iii. Take measures to provide segregated facilities for VRU on roads with speed limit exceeding 50 Km/hr (mobility roads).

2.3.4 Roadworthiness of Vehicles

It is recognized that a significant proportion of the fleet of vehicles plying Partner State roads is more than five years old. Worthy of particular attention is the fleet of vehicles providing para-transit services in urban areas. The contribution of vehicle defects to traffic crashes is significant even if this is generally underreported in the police reports which tend to focus on human error for prosecution purposes. Vehicle inspection and enforcement is very limited largely due to limited human resources (vehicle inspectors), equipment and the fact that the system in place was developed long ago when there were very few vehicles. There is thus a need to invest in reforming vehicle inspection and enforcement in order to remove unsafe vehicles from using the public roads.

Measures

Partner States should implement a modern vehicle inspection system and require annual vehicle inspections for all vehicles older than five years.

2.3.5 Riding Cycles without Helmets

Wearing of helmets by motorcyclists and pedal cyclists significantly reduce the risk of severe head injury or death in the event of a crash. However, all helmets do not offer the same level of protection therefore countries must specify standards and information campaigns and enforcement to ensure

that the wearing of helmets is done correctly. Problems in Partner States include low wearing rates and the law is not comprehensive. For example the helmet law in Tanzania applies only to the drivers and do not apply to all engine types. Another problem is that riders do not seem to appreciate that the wearing of helmet is for their own protection and not just to comply with the law. This results in low wearing rates and severe head injuries when crashes occur. There is therefore a need to harmonize the law across the Partner States and for information campaigns to raise awareness of the benefits of using standard helmets when riding a motorbike.

There is also a consideration of hygiene for passengers: it is not acceptable to share helmets and it is not practical for each passenger to own a helmet. One practical solution is the use of disposable head cover between the helmet and the hair. It has been proposed in Rwanda that such head cover be made of a material that can be re-cycled for the sake of the environmental preservation.

Measures

i. Amend the helmet law so that all cyclists (both riders and passengers of motorcycles and pedal-cycles) are required to wear helmets on all classes of roads,
ii. Carry out information campaign, enforcement and evaluation to ensure near 100% wearing rates,
iii. Harmonize helmet standards across the Partner States (ventilated tropical type to encourage use in warm weather), and
iv. Discourage availability of helmets which do not meet standards and hence offer inadequate protection in crash.
v. Manufacture disposable head covers made of materials that can be recycled in order to address health concerns.

2.3.6 Use of Seatbelts and Child Restraints

Wearing of seat belts provides an effective restraint for vehicle occupants and reduces the risk of death or serious injury by about 50%. Low wearing rates in Partner States means that the benefits have not been realized. In Tanzania and Burundi the law requires drivers and front seat passengers to wear seatbelts while for Rwanda, Uganda and Kenya all occupants are required to wear seat belts. WHO (2009) reported that Burundi has a seatbelt wearing rate of 95% for front seat occupants. Rwanda has a seat belt wearing rate of 80%. Child restraint is increasingly important in urban areas due to the growing motorization. The Partner States need to step-up enforcement and require seatbelts to be worn by all vehicle occupants.

Measures

i. Harmonize legislation so that all vehicle occupants are required to wear seat belts,
ii. Increase enforcement and information campaigns, and
iii. Introduce legislation for child restraint and take measures to increase availability of child restraint seats.

2.3.7 Pre-hospital Care

Pre-hospital services including rescue services, first aid, communication and transport to the nearest appropriate health facility are known to make a big difference in the consequences of the RTI. This is due to the fact that prevention of blood loss by RTI victims during the first hour after the crash is critical to the survival of those experiencing serious injury. At present many of the RTI victims are transported to health facilities by “good Samaritans” and the provision of first aid is far

from adequate. Macharia et al (2009) reported that only 16 percent of RTI victims surveyed in Kenya received first aid. Andrews et al (1999) reported that mean time between occurrence of RTI and treatment at a teaching hospital in Kampala was 155 minutes. Improvement and harmonization of pre-hospital services among Partner States is necessary for better management of RTI.

The underlying cause of the weak pre-hospital services is the amount of resources allocated to the services and the way the services are organized. Integration of rescue and ambulance services needs to be considered. Provision of the services by units at district level (possibly funded by national health insurance and the government) instead of each hospital running its own service can help provide cost effective service. The development and operations of the Ghana Ambulance Service (GAS) reported in WHO (2009) and the current practice in Rwanda offer interesting case studies of provision of ambulances and first aid and rescue services. The availability of cell phones and the use of a national universal access number for communication with all emergency services have increased the potential of accessing pre-hospital services.

Measure

Partner States should study how best to improve the pre-hospital services and implement the most effective system.

2.3.8 Hospital Trauma Services

Effective and timely medical services can in many cases save lives of road traffic crash victims. The risk of death from RTI can be reduced by improving pre-hospital and hospital services. Research in the Partner States including Andrews et al (1999), SUMATRA (2007), Twagirayezu et al, (2008), Macharia et al, (2009) and Nyoni and Masaoe (2011) indicate that reasonable service exists especially for those who can pay. Those who cannot pay often cannot access appropriate medical treatment timely and hence the probability of their RTI resulting in death or permanent disability is higher. This places vulnerable road users at disadvantage because they cannot afford safer modes and in many situations they may not be able to afford timely and appropriate medical treatment. Their compensation is often minimal and in many cases they receive no compensation at all (SUMATRA, 2007).

Measures

i. Introduction / improvement of health insurance system that provides sufficient resources to medical facilities so they can handle all RTI victims regardless of their personal ability to pay or the Partner State from which they originate.

ii. Compensation of RTI victims particularly the hit-and-run victims should be taken care of. One way is to create a special fund for the purpose.

2.3.9 Para Transit Transport in Urban Areas

The increasing use of informal public transport in the Partner States including mini - and micro - buses, motorbikes, three wheeled vehicles (bajajis) and even bicycles has a serious impact on road safety. The practice of deploying unlicensed drivers (called day-workers in Dar es Salaam), motorbike riders with no formal training along the feeders routes, long working hours, stiff competition for passengers and poor vehicle condition are some of the problems associated with this mode of public transport and contributes to the associated low level of safety.

The underlying cause is the failure of governments to provide attractive conditions for significant investment in the provision of safe and convenient public transport services in major cities.

Measures

i. Governments should carefully study transport needs of major cities, develop responsive policy, governance and environment for provision of reliable, sufficient, safe and convenient public transport.
ii. Take measures to ensure that only properly trained and licensed drivers are allowed to drive PSV.
iii. Establish and enforce crashworthiness standards for PSV.

2.3.10 Land Use and Transport Planning

Poor planning of urban areas is a major contributor of the high risk associated with the vulnerable road users (VRUs). Short pedestrian and cycle paths to schools, shops and other services segregated from fast traffic and integrated with streets with traffic travelling at 30 km/hr or less can significantly improve the safety and liveability of our cities. The underlying cause for the planning deficiencies is the focus on the provision for the automobile which accounts for a very low proportion of short distance trips in urban areas.

Measures

Land use and transport planning for urban areas should focus on the provision of NMT routes properly integrated with streets and segregated in the case of mobility roads carrying high speed traffic.

2.3.11 Un-licensed Drivers/riders and Poor Driver Behaviour

Proper training of drivers of motor vehicles and riders of motorcycles through formal driving schools using standard curriculum which includes adequate education on road safety as well as vehicle control and navigation skills is crucial to reduction of traffic crashes due to driver error. Proper driver examination and licensing followed by enforcement ensures that only properly trained and licensed drivers use the public roads. The risk due to inadequate driving skills and inconsideration of other road users (especially VRUs) can thus be reduced considerably. An exploratory study reported by Nyoni and Masaoe (2011) found that some motorcycle riders in Dar es Salaam believed that if you posses a driving license of any class you may ride a motorcycle on public roads. The law, on the other hand, requires specific testing for riders of motorcycle. Some of the interviewed traffic police estimated that around ten percent of the riders attended a motorcycle riding test. A survey by the Road safety Unit of the Ministry of Works (Tanzania) involving commercial vehicles during the year 2000 found that 30 percent of the drivers did not have a driving license (Batalia et al 2001). In Tanzania the issue of forged or otherwise improperly obtained driving licenses is being addressed through an ongoing exercise of re-issuing of driving licenses with adequate security features. This is an area where efforts are required to improve the skills of the drivers and ensure that drivers across the trading block have the required training and are properly licensed. A component of this

project deals with review of driver training curricula across the trading block with view to removing any weakness and adopting best practices.

Measures

i. Implement effective driver training, testing and licensing system across the Partner States and
ii. Carry out information campaign and step up enforcement to ensure compliance by driving schools and individual drivers.

2.3.12 Use of Mobile Phone When Driving

Use of mobile phones while driving constitutes a distraction to the driving task that compromises the safety of road users. In some Partner States it is an offense to drive while using a mobile phone and in others it is not. It is desirable that all Partner States make it illegal to drive while using mobile phone.

Measures

i. Partner States which permits use of mobile phones while driving should legislate against the practice.
ii. Carry out information campaigns and enforcement.

2.3.13 Over-loading of Goods Vehicles

Over-loading of goods vehicle combined with speed on hazardous road sections increases significantly the possibility that the driver loses control of the vehicle and the consequences of the crash. Thus vehicle over-loading contributes to the occurrences of traffic crashes. However, this section does not include discussions on measures to manage over-loading as the issue is extensively covered in the respective component of the project.

2.3.14 Summary of risk Factors and Measures

Risk factors ranging from unsafe road user behaviour like excessive speed, drinking and driving, not wearing safety gears (helmets, seatbelts and child restraint); weaknesses in land use and road infrastructure planning and management and vehicle roadworthiness were presented. Measures to manage the risks include recovery and rehabilitation of victims, legislation and enforcement, improvement of land use planning and infrastructure design and management, vehicles inspection to ensure that only safe vehicles and properly trained and licensed drivers use the public roads were recommended. Potential projects and actions for implementing the proposed measures are outlined in Chapter Four.

2.4 Institutional set-up, Funding and Capacity for Road Safety Actions

Management of RTC necessarily involves several sectors including infrastructure providers and managers, education, health, legislation, enforcement, driver training and licensing, finance, the mass media, vehicle providers and insurance among others. Best practices have shown that coordinating the sectors to act towards a common vision and a well defined system that ensures that outputs and targets are achieved is a prerequisite for developing a safe traffic system.

2.4.1 Institutional Set-up

Our review of transport policy (Kenya and Rwanda), draft road safety policy (Uganda) and road safety policy (Tanzania) and institutional set-up suggest that there is a need for restructuring/strengthening coordination of the sectors involved in road safety work and providing sufficient and sustainable financing and capacity to carry out roads safety work. This was also the view of some researchers for example Odero et al (2003) who concluded that impediments to successful road safety work included “ineffective coordination, inadequate resources and qualified personnel ...” The government of Kenya acknowledged the conclusion of the researchers as it noted the challenges facing the transport sector and re-constituted the NRSC in their five year national road safety action plan (GoK, 2009). One of the actions proposed under the plan is the legislation for and formation of a Road Safety Board by 2014. Capacity building and securing of funding are included in the plan. The challenge for coordination of road safety work can better be appreciated by looking at the number of institutions involved in road safety work in, for example, Kenya.

Institutions involved in road safety work in Kenya:

i. National Road Safety Council
ii. Ministries responsible for:
    - Transport,
    - Health
    - Roads (and Roads Authorities: Kenya National Highway Authority, Kenya Rural Roads Authority and Kenya Urban Roads Authority)
    - Local Government
    - Nairobi Development
    - Home affairs – The Traffic Police

(ii) Transport Licensing Board (TLB),
(iii) The Motor Vehicle Inspection Unit,
(iv) The Registrar of Motor Vehicles,
(v) The Driving Test Centre,
(vi) Local Authorities.

The road safety functions are spread across government ministries and departments. The Registrar of Motor Vehicles for instance, is currently under the Ministry of Finance, while the Driving Test Unit is under the Office of the President. This set-up sometimes leads to mishandling of transport issues including road safety in Kenya. However, fragmentation of road safety functions across several government ministries is not a peculiar feature for Kenya only. Tanzania and Uganda share the same experience. There is therefore a clear need for institutional reform to facilitate effective coordination of road safety work. The Partner States recognize this need and some recent studies address this issue.

2.4.2 Political Will and Capacity for Road Safety Work

Over the years governments have expressed concern for the road safety problem without concrete actions to manage it beyond carrying out studies and legislating laws. The ever increasing trend of RTI fatalities in nearly all countries is a witness to the fact that governments have not acted to intervene effectively to manage the problem. Lack of political will beyond "the talk" is the greatest hindrance to road safety work in nearly all Partner States. One function of an effective road safety lead agency is to promote road safety work as a core business of government. The lead agency must raise awareness of the role of government in road safety starting at the level of parliament down to local governments.

Because road safety activities beyond studies carried out by foreign technical assistants and consultants were rare, local capacity for this work is limited. There are professionals capable of doing the work but their exposure to road safety work has been limited by lack of a meaningful road safety programme. Future implementation of road safety work will need to build capacity by promoting learning by doing model where technical assistance is part of national programmes largely developed and managed by local professionals.

2.5 Recent Road Safety Initiatives and Achievements

Generally Partner States' governments are increasingly showing commitment to road safety work and are supporting initiatives to address the RTI problem. The following sections summarize recent efforts.

2.5.1 Burundi

Burundi recently carried out two studies in the area of road safety. One proposes a new Highway Code (includes proposals for road signs, road traffic regulation and all matters related to road transport and some safety aspects) and the other with a more specific focus on road safety situation including the institutional structure. Both reports are being discussed by the government. It is hoped that the issue of reporting and compiling of traffic crash statistics will be dealt with in order to have reliable official benchmark of RTI situation. We have used the proposals of both studies as a background for our development of recommendations for harmonization in this report as well as other components of the project.

2.5.2 Kenya

The National Road Safety Action Plan 2009 – 2014

Road safety in Kenya is addressed under the Integrated Transport Policy (2009). The National Road Safety Action Plan 2009 – 2014 may be seen as a strategy to implement the road safety component of that policy. The preparation of the document involved all the stakeholders in a consultative manner. An overview of Kenya's road safety situation which provided a basis for the identification of priority issues is included. The plan includes thirteen areas namely:

1) Road safety coordination and management
2) Road safety funding
3) Road crash data system
4) Road safety research

5) Development and maintenance of roads
6) Non-motorized and intermediate means of transport
7) Vehicle safety standards and compliance
8) Public transport regulations and compliance
9) Driver training, testing and licensing
10) Traffic legislation and enforcement
11) Road safety awareness
12) Road safety awareness for children
13) Emergency services and rehabilitation

For each area a specific objective is stated as well as short term, medium term and long term actions for implementation. A draft budget is included.

One of the implementation points under the area of road safety coordination and management is "to harmonize national road safety measures in Eastern Africa region and other trading blocks in the longer term" by 2014 and establishment of a Road Safety Board as a corporate body by 2014. The role of coordination within the country and harmonization within the Partner States and other trading regions is thus recognized by the Government of Kenya.

Kenya experienced a significant reduction in fatalities in 2004 but there were challenges in the transport sector and it was not sustained. To be noted is the success in reduction of fatalities by 20% in the year 2004 which was attributed to the introduction by Ministry of Transport in 2003 of new regulations in the public transport (including regulations on vehicle carrying capacity, seat belt use, speed governors and driver certification) and widespread public support. The Minister through the foreword of the Action Plan noted the need to coordinate road safety actions (in a sustainable manner) to ensure that the road safety situation does not revert to the pre-2003 situation. The overall target is to achieve 50% reduction in fatalities at the end of the five year implementation period.

2.5.3 Rwanda

Rwanda published its transport sector policy in the year 2008. The policy noted weaknesses in the transport sector especially institutional problems such as the absence of clear vision and strategy as well as a legal and institutional framework not adapted to the present or future contexts. The policy sets out the vision of the transport sector in Rwanda "to gain under vision 2020 modern infrastructure and cost effective and quality services with due regard to safety and environmental concerns …" Under the policy one of the objectives of the sector is to "Improve safety for goods and passengers on the principal modes of transport."

The policy lists the actions aimed towards the improvement of transport safety. These include:

i. Introduce regulatory measures to enhance transport safety and code enforcement.
ii. Formulate and promote road safety education and sensitization campaigns accessible to all.
iii. Identify and rectify problematic areas that might be potentially detrimental to transportation safety,
iv. Develop infrastructure that encourages better participation amongst its users.
v. Update the regulations related to transport safety.
vi. Establish a permanent inspection and maintenance program for vehicles and other equipment related to the transport sector.

vii. Harmonize the technical norms related to the transport sector with those of the neighbouring countries within the context of regional integration.
viii. Reinforce consultation amongst partners and establish their respective responsibilities.
ix. Strengthen the technical competency of all stakeholders.

There has been road safety success in Rwanda mainly due to high level commitment and effective enforcement. Their transport policy and organizational structure supports road safety work although coordination among the sectors is not effective due to structural weakness inherent in its National Road Safety Commission (NRSC). There has been capacity building and eradication of corruption in the enforcement sector although it may be impossible to achieve 100 percent consistent behaviour. The infrastructure sector has declared road safety as a priority. However, the requirement for road safety audit is not legally mandatory. Adopting a national target, use of ICT in enforcement and coordinating all sectors to contribute effectively to its achievement seems to be the next phase that will take Rwanda to new levels of road safety achievement. This will help Rwanda to overcome the tendency to abandon road safety work to the police department, a mistake many countries made in the past.

2.5.4 Tanzania Mainland and Zanzibar

National Road Safety Master Plan (Tanzania Mainland and Zanzibar) (2004) and the National Road Safety Policy (2009)

The National Road Safety Master Plan for Tanzania Mainland and Zanzibar, 2004 (NRSM) reviewed the road safety situation in the country, noted that the road safety programme prepared in 1995 could not be implemented fully due to weaknesses in the coordination mechanism and identified policy issues and thus provided a starting point for the formulation of the National Road Safety Policy (Tanzania Mainland) approved in 2009. The policy provides for the formation of a Road Safety Board. The areas for which policy directions are stipulated are similar to those contained in the Kenya's National Road Safety Action Plan 2009 – 2014. Tanzania's road safety vision is "to have a safe environment for road traffic system which is in accordance with internationally accepted standards." The current thinking internationally is towards vision zero or no tolerance for serious injury as a result of a road traffic crash. In the short term the goal is to "reduce road deaths by at least 25% by 2015 taking 2008 as the base year." This goal is to be achieved by continuously and efficiently reducing the occurrence and severity of road crashes. The policy requires the implementation of five "Es" strategy for the reduction / prevention of road traffic crashes. The strategy includes: "Engineering and traffic environment, Education and information, Enforcement and legislation, Emergency response and victim support, Evaluation and other comprehensive actions." Policy directions are stated but targets and indicators are to be set in the strategy under preparation. The proposed Bill for the implementation of the policy is reviewed in Chapter Three.

2.5.5 Uganda

Draft Road Safety Policy (2010) and Arrive Alive Campaign

The road safety condition in Uganda according to the Policy is still unsatisfactory and road accidents, fatalities and injury have been increasing during the last 10 years. In 2008 there were 14,390 reported accidents with 1,438 fatalities and 12,946 injuries compared to 2010 which had 2,334 fatalities, 18,250 reported accidents and 12,076 injuries. During the period 2000 to 2008, the

vehicle population on roads doubled, but the fatalities per 10,000 vehicles was reduced from 88 in 2000 to 64 in 2007.

The Government of Uganda has undertaken short, medium and long term measures to reduce accidents on roads through the 3 “Es” of education, engineering and enforcement and by issuing of appropriate regulations. The Government of Uganda has developed a five year road safety programme with a three year National Road Safety Action Plan whose implementation started in 2004. This Action Plan has a three pronged approach namely; capacity building in the form of institutional support; physical improvement of some critical black spots on major road corridors and, enhancement of enforcement.

The arrive alive campaign is serving to highlight the serious road safety problem and what the private sector and civic organizations can do to contribute towards the management of the problem.

2.6 Summary

East African countries like the rest of the Sub-Saharan have very high number of road traffic injury casualties and low motorization rate. Annual loss due to road traffic crashes is in excess of 1.7 billion US dollars. The distribution of fatalities across different road user groups is similar across the countries suggesting similar road system risk factors. However, the level of enforcement in Rwanda and Burundi was ranked much higher than Kenya, Uganda and Tanzania. Effective enforcement of road safety laws in the two countries largely accounts for their slightly lower road traffic system risk and for the decreasing total road traffic injury fatalities for the case of Rwanda. Partner State governments have initiated actions to improve the road safety situation but have not been sustained due to weak coordination inherent in their legal framework which assigns the role of a lead agency to an unfunded, advisory NRSC without adequately staffed secretariat. Road safety work is fragmented across many government departments with weak coordination among them. Ongoing policy and institutional reforms have not yet produced interventions on the traffic system and the trend of fatalities is still increasing.

The recommendation for a strong lead agency with clear and recognized mandate for coordination and other functions, sustainable funding and capacity building should be accepted and acted upon by governments. Exactly how this should be implemented in each Partner State will vary but formation of a corporate body (Road Safety Board) with sustainable funding is critical.

3. REVIEW OF ROAD SAFETY LAWS

The five East African Partner States have several principal and subsidiary legislation regulating road safety in their respective countries. This chapter discusses the laws that govern road safety in each Partner State.

3.1 Burundi

3.1.1 Principal Legislation

Act No. 1/04 of 17th February 2009 on Domestic Road Transport

This is the main legislation that governs road safety in Burundi. It is stated by the Act that, the State through the Ministers in charge respectively of transport and roads, in collaboration with other relevant departments must ensure road safety, take steps to curb the causes of accidents, inform and educate the public about the problems of prevention and road safety. Moreover, the Act proceeds to provide that, the vehicles to be imported must meet the safety and environment requirements. Departments in charge of transport and finances will take steps to prohibit the use of vehicles that do not meet norms of the traffic code in force and especially those related to business public transport with opening doors onto the passenger floor. On the side of garages, the Act provides that, to be acceptable to the profession of operating a garage, any person or entity must meet the requirements of safety and environment established by an order of the Minister in charge of transport. Also for any vehicle registered or temporarily registered in Burundi must pass a compulsory periodic road (worthiness) test, performed by a competent authority which has appropriate equipment to accomplish this mission.

3.1.2 Driver Training, Testing and Licensing

This is covered by the provisions of Chapter 1 as follows:

i. That, all drivers must hold a valid driving licence or provisional driving licence (in the sense of learner licence) subject to the category and the use of the vehicle driven.
ii. The application for driving licence shall comprise of a certificate of physical fitness issued after medical examination by a licensed doctor, a certificate or professional ability diploma issued by a licensed driving school and a clean police record with respect to domestic road transport offences.
iii. The driving licence may be granted on the basis of a driving ability practical test organized by a driving school.
iv. Also this Chapter provides for the circumstances in which the driving licence may be suspended or permanently removed.

3.2 Kenya

3.2.1 Principal Legislation

The Traffic Act

In Kenya, the principal legislation that governs road safety is the Traffic Act Cap 403. The Act is divided into XII Parts.

i. Part I is preliminary;
ii. Part II - registration of vehicles;
iii. Part III - licensing of vehicles;
iv. Part IV - driving licences;

v. Part V - driving and other offences relating to the use of vehicles on roads;
vi. Part VI - regulation of traffic;
vii. Part VIA - designated parking places;
viii. Part VIB – parking elsewhere than in designated parking places;
ix. Part VII – accidents;
x. Part VIII – suspension, cancellation and endorsement of driving licences;
xi. Part IX – offences by drivers of vehicles than motor vehicles and other road users;
xii. Part X – miscellaneous provisions as to roads;
xiii. Part XII – public service vehicles and
xiv. Part XII – general.

Although, all Parts in one way or another correlate to road safety, but Part V which is on driving and offences relating to the use of vehicles on roads is of utmost importance in relation to road safety in Kenya. This part provides among other things:

i. The maximum speed to drive motor vehicle on roads for the public safety or to prevent damage to the road and, it is an offence to exceed that speed, and the punishment for contravening that provision is provided.
ii. It is also provided that, it is an offence to drive under the influence of alcohol or drink when driving or in charge of public service vehicle and provides for the punishment in case one contravenes these provisions.
iii. Under the Act, reckless and careless driving of a motor vehicle on a road or at a speed or in a manner which is dangerous to the public is also prohibited and punishment for contravening such provisions is provided by the Act.
iv. This part also legislates for proper use of fuel for motor vehicle, use of signals and signs etc. Breach of any of these provisions is provided for in this part.
v. The manner of parking vehicles carrying explosives, petroleum and the like and the punishment for contravening such requirements.
vi. The Act further provides on the condition of a vehicle that is allowed and limitation of load to be carried by such vehicle and the punishment for improper condition or overloading.
vii. Provisions on prevention of accidents on roads, the molestation or obstruction of a driver of a motor vehicle while it is in motion are also spelt here. Also carrying passengers in such numbers or in such a position that will interfere with the safe driving of the motor vehicle is forbidden by this Part.
viii. For a two-wheeled motor cycle, the Act provides that, it is an offence to carry more than one person in addition to the driver or to carry that person not on a proper seat securely fixed to the motor cycle behind the driver's seat. The Act also provides for the punishment for contravening these provisions.
ix. The Kenyan Road Traffic Act also provides the maximum driving hours which should not exceed eight hours in any period of twenty four hours and the punishment for contravening this provision is provided.

3.2.2 Driver Training, Testing and Licensing

This is covered by Part IV from Section 30 to 40 in which various issues in relation to driving licence have been provided as follows:

i. It prohibits driving of a motor vehicle of any class on a road unless the driver is the holder of a valid driving license.

ii. It also provides for the conditions to be complied with before one is granted with a driving licence such as to undergo and pass a driving test, to pass a test of competence, to produce the certificate of a medical practitioner that the applicant is physically fit to drive a motor vehicle, etc.
iii. It further provides for the age limit for one to be granted with a driving license.
iv. Moreover, this Part provides for various circumstances in which the Registrar may revoke driving licence.

3.2.3 The Kenya Roads Boards Act

This Act, establishes the Kenya Roads Board together with its powers and functions. The function of the Board is to oversee the road network in Kenya and coordinate its development, rehabilitation and maintenance. It is also the principal adviser to the government on all matters related thereto. The Board shall, among many other functions, coordinate the development, rehabilitation and maintenance of the road network with a view to achieving efficiency, cost effectiveness and safety.

3.2.4 The Kenya Roads Act

The Kenya Roads Act establishes three organs namely, the Kenya National Highway Authority, the Kenya Rural Roads Authority and the Kenya Urban Roads Authority. The Act also provides for the functions of each organ. The Kenya National Highway Authority is responsible for the management, development, rehabilitation and maintenance of national roads whereas the Kenya Rural Roads Authority is responsibility for the management, development, rehabilitation and maintenance of rural roads and the Kenya Urban Roads Authority is responsibility for the management, development, rehabilitation and maintenance of all public roads in the cities and municipalities in Kenya except where those roads are national roads.

3.3 Rwanda

3.3.1 The Presidential Decree Regulating Traffic Police and Road Traffic

In Rwanda there is the Presidential Decree Regulating Traffic Police and Road Traffic. The Decree was enacted for the purpose of regulating traffic on the public highway, of pedestrians, of vehicles and loaded or mounted draught animals, and livestock. Part 2 of the Decree provides for the general rules on road safety. The Decree covers various issues in relation to road safety, namely;

i. Orders, requisitions and signalling: The Decree provides for the issues of orders, requisitions and signals whereby every user of the public highway must obey immediately orders of qualified agents
ii. National Driving Licence: Nobody can drive, on the public highway, an automotive vehicle if he is not holding and carrying a driving licence issued by the National Police.
iii. Crossing and overtaking: The Decree clearly provides on when and how crossing and overtaking should be performed by a driver of a vehicle which is in motion.
iv. Speed and distance between vehicles: The driver must drive his vehicle cautiously and adjust his speed to the required measure notably by the layout of the areas, weather conditions, the vehicle load and state, the road condition, etc.
v. The use of lights, horns and safety belts: For sign posting and lighting vehicles as well as the indication of their direction changing and speed. It is forbidden to use other lights or reflectors or horns than those prescribed by the Decree. Also all drivers and passengers are obliged to fasten their seat belts correctly.

vi. Special rules applicable to specific users: pedestrians, convoys, yoked vehicles, barrows-wheelbarrows, etc. are also covered by specific provisions in the Decree.
vii. Vehicles: specific issues like dimensions, loading, maximum weights authorized, braking, etc. are well addressed by the Decree in terms of their requirements with the aim of protecting road safety on roads.

3.3.2 Driver Training, Testing and Licensing

The Decree provides the following in relation to driving licences in Rwanda:

i. It prohibits the driving of automotive vehicle without a valid driving licence issued by the National Police.
ii. Also the Decree provides for the categories for which the licence is valid.
iii. The Decree further provides for the conditions which one is required to fulfil in order to qualify to be granted with a driving licence such as passing both theory and practical tests.
iv. Moreover, the Decree provides for the circumstances in which the driving licence may be refused to or withheld from persons affected with things like acuteness of vision, hearing, loss or accented and bilateral decrease, etc.
v. Also the procedures to be followed until such driving license is refused or withheld have been provided by the Decree.

3.4 Tanzania

3.4.1 Principal Legislation

The Road Traffic Act 1973

The Road Traffic Act, 1973 is among the laws that govern road safety in Tanzania. This law has 118 sections, divided into VIII parts together with two schedules.

Part I covers Preliminary provisions;
Part II covers Registration of Motor Vehicles;
Part III, Driving Licences;
Part IV, Use of Motor Vehicles;
Part V, Control of Traffic;
Part VI, Enforcement;
Part VII, National Road Safety Council and
Part VIII, Miscellaneous Provisions.

Under this law, in one way or another, every provision relates with the issue of road safety, but the conspicuous part of this law that deals with road safety is Part IV. Part IV deals with the use of motor vehicles on roads and provides that; among others;

i. that motor vehicles to be used on a road should be in good repair and in efficient working order;
ii. the weight of the vehicle and the load to be of permissible weight and must comply with all conditions of carrying the load;
iii. the requirement of the drivers to use warning signals;
iv. the use of lights by drivers when driving at night and how to use such lights;
v. prohibition of reckless or dangerous driving, and it is an offence to drive a motor vehicle or trailer recklessly or dangerously;

vi. it is an offence to drive a motor vehicle while under the influence of alcohol or drive a motor vehicle with blood-alcohol concentration above prescribed limit;
vii. a person who parks or stands a motor vehicle or trailer on any road carelessly or without reasonable consideration for other persons using the road commits an offence and also the same provision provides for the conditions which must be complied with by every person who is driving a motor vehicle on roads for his safety and safety of other road users including the pedestrian. In emergency situations, the driver of emergence motor vehicle is covered and taken into consideration by this Act.
viii. Over speeding and driving while disqualified or without valid driving licence is forbidden by the Act under this Part.
ix. The Act under this Part, has gone further to cover the issues of compulsory stopping at railway crossing, driving unreasonably slowly, duties of drivers in case of accidents, riding in dangerous position, restriction of pillion riding, obstructing a driver of a motor vehicle, causing damage to a motor vehicle, taking motor vehicle without owner's consent, power of the court to order forfeiture of vehicle used in commission of offence and disqualification of driver as well as penalties for offences under Part IV of this Act.

Apart from Part IV of the Act, there are other provisions in the Act which, in one way or another, contribute to the whole issue of road safety. They include, driving of a motor vehicle with a valid driving licence, control of traffic, enforcement of the law by various law enforcement organs as stipulated by the law.

Moreover the Act provides for the role of the National Road Safety Council in strengthening road safety in Tanzania. The functions of the National Road Safety Council are:

i. To provide an effective central organization to intensify road safety activities and to exploit fully and continuously available knowledge and experience in all matters connected with road safety;
ii. To promote research into causes of road accidents;
iii. To promote statistical research as to the number, types and cost of traffic accidents;
iv. To diagnose, from research and statistical records or any other sources, causes of road accidents and to suggest counter-measures to combat accidents problems;
v. To identify local accidents hazards, devise and suggest remedies and advise the authorities concerned to promote action;
vi. To make proposals for amending traffic and road safety legislation with a view to reducing road traffic accidents;
vii. To encourage and provide training and education for road users;
viii. To increase road users' knowledge of particular hazards, how they arise and how to cope with them;
ix. To induce a more positive attitude to road safety through lectures, demonstrations, campaigns or any other means;
x. To collect, prepare and disseminate educational material on road safety;
xi. To prepare and promulgate fully integrated programmes of public information and publicity by means of all appropriate media of mass communication;
xii. To advise on current or projected ideas concerning motor vehicle or trailer design, equipment and maintenance with particular reference to safety devices.

3.4.2 Driver Training, Testing and Licensing

The issue of driving licences is covered by Part III (sections 19-38) of the Act in which the following aspects have been covered:

i. It prohibits driving without a valid driving licence;
ii. It also provides the classification of motor vehicles for purposes of grant of driving licences;
iii. It provides for the requirements/conditions to be fulfilled for one to be granted with a driving licence, such as, passing driving tests, compliance with application procedures, age limits, possession of a certificate of competency, etc.;
iv. Furthermore, the Act provides for circumstances in which a driving licence may be cancelled or suspended.

3.4.2 The Roads Act, 2007

Part V of the Roads Act, 2007 deals with road safety in Tanzania. Under this Part, some issues in relation to road safety are covered.

Road furniture

Section 31 of Part V covers the issue of road furniture by requiring the road authority to ensure that the necessary road furniture are erected on the public roads under its jurisdiction as may be prescribed in the regulations or any other written law; and any person who damages, removes or obscures a road furniture commits an offence; and any person who fails to comply with a message conveyed by road furniture commits an offence.

Speed limit

It is provided by the provisions of section 32 that, the road authority shall prescribe speed limits in respective of all roads or sections thereof as the Ministry may approve and any person who fails to comply with the prescribed speed limits commits an offence.

Safety of road users

According to section 33, the road authority shall ensure the safety of road users during the design, construction, maintenance and operation of a public road by providing sidewalks, overhead bridges, zebra crossings and other matters related thereto. Also the road users and pedestrians in particular shall use public roads in a manner that does not pose safety hazard to themselves, vehicles or any other road users and any person who fails to comply with the provisions of this section commits an offence.

Driving on public roads

Section 34 provides that, any driving and use of motorized or non motorized vehicle on a public road shall be as prescribed in the regulations and any person who contravenes the provision of this section commits an offence.

In principle, the provisions of the Roads Act 2007 seem to replicate those contained in the Road Traffic Act, 1973, thus, underscoring the vitality of road safety in the road transportation system in Tanzania.

3.4.3 A Draft Bill on the Road Traffic and Safety Act

Apart from the above principal legislation that governs road safety in Tanzania, there is a Draft Bill on Road Traffic and Safety which will be the main law that governs road safety in Tanzania. This Bill

is bulk and detailed compared to other laws that govern road safety in Tanzania. It is divided into XV Parts, in which Part I provides for preliminary provisions and Part II covers administrative provisions whereby the National Road Safety Agency, the Driver and Vehicle Examination and Licensing Agency together with the Transport Tribunals are established.

The National Road Safety Agency:

The object of the Agency is to develop and promote road safety and traffic management in Mainland Tanzania and to coordinate policies in relation to them. Its powers and functions among many are:

i. To specify minimum design, construction, operation and maintenance standards for public roads;
ii. To specify minimum standards for establishing and operating trauma facilities and para-medical facilities for dealing with traffic related injuries on national roads;
iii. To conduct or cause to be conducted safety audits to monitor compliance with standards specified by it;
iv. To make recommendations or issue guidelines relating to design, construction, operation and maintenance standards for roads other than national roads.

Driver and Vehicle Examination and Licensing Agency (DVELA):

The object of the DVELA is to promote good driving standards in the country; and ensure the use of road worthy vehicles on the roads and in other public places. Among many functions of DVELA in achieving its object are:

i. To issue driving licences;
ii. To Register and license driving schools;
iii. To license driving instructors;
iv. To inspect, test and register motor vehicles; etc.

Transport Tribunals:
The object of the Transport Tribunals among many others is:

i. To encourage compliance with this Act and regulations made under it relating to road traffic and to promote road traffic safety;
ii. Penalize drivers and operators who are guilty of infringements or offences through the imposition of demerit points leading to the suspension and cancellation of driving licences, driving permits or operators' licences; etc.

Part XII of the Bill encompasses the principal road safety provisions. Various issues in relation to road safety are provided for as hereunder:

i. Dangerous, careless and inconsiderate driving whereby a person who drives a motor vehicle dangerously or carelessly on a road commits an offence and the punishment is provided.
ii. Speeding, speed limits and speed control whereby all drivers will be required to comply with the speed limits on all public roads as specified in the regulations made by the minister and it will be an offence for not to comply with such speed limits. Punishments are also provided in this Part.

iii. Traffic calming works which embraces consultation about traffic calming proposals, restriction on the construction of rumble devices, placing of traffic signs and all other works which are traffic calming works.
iv. Road humps; e.g. consultation about road hump proposals, the nature, dimension and location of road humps as well as placing of traffic signs.
v. Prohibition of drink-driving, intoxicants, in which, the issues of prohibition of driving motor vehicle while under the influence of alcohol or drugs or driving when alcohol concentration is above prescribed limit, etc. are also provided.
vi. Seat belts, child restraints, etc. whereby various issues in relation with the following are covered:
    - seat belts, child restraints and other safety equipment;
    - compulsory wearing of seat belts;
    - carrying of children in motor vehicles; and
    - regulation of safety equipment for children, etc., in motor vehicles
vii. Wearing of protective crash helmets whereby it is now compulsory to wear protective crash helmets by any person driving, riding, or riding on, an all terrain vehicle, a motorcycle or in a sidecar, or on a moped on a road and such driver or passenger must produce helmet for inspection.
viii. Miscellaneous road safety provisions in which various issues in relation to giving way, giving way at intersections and junctions, giving way when entering road from private land, giving way at pedestrian crossing, etc. are covered.
ix. Disqualifications, suspensions and endorsement of drivers' licences.

Furthermore the Road Traffic Act, Cap 168 R.E. 2002; the Motor Vehicles Insurance Act, Cap 169 R.E. 2002, the Motor Vehicle Driving Schools (Licensing) Act, Cap 163 R.E. 2002, the Transport Licensing Act, Cap 317 R.E. 2002 and Part V of the Roads Act, 2007 (Act No. 13 of 2007) will be repealed by this law when enacted.

3.5 Uganda

3.5.1 Principal Legislation

The Traffic and Road Safety Act

The main legislation that governs road safety in Uganda is the Traffic and Road Safety Act 1998. This law is divided into X parts and two (2) schedules. The provisions relating to the use of motor vehicles on roads are provided under Part VI of the Act as follows:

i. The condition of motor vehicle, etc. for use on road. The motor vehicle, trailer or engineering plant and all its parts and equipment, including tyres and lights shall be in a good repair and in efficient working order and shall not carry load that is greater than the load capacity and it is an offence to contravene that requirement of the law.
ii. Reckless or dangerous driving of a motor vehicle, trailer or engineering plant is an offence under the Act, and the punishment is also provided in this Part.
iii. Driving while under the influence of drink or drugs or driving a motor vehicle with blood alcohol concentration above the prescribed limit is an offence and the punishment for contravening such provisions is provided.

iv. Moreover, the Act proceeds to provide that, any person who, while under the influence of drink or drug to such extent as to be incapable of having proper control of a motor vehicle, trailer or engineering plant is in charge of a motor vehicle, trailer of engineering plant on any road commits an offence and the punishment is also provided.
v. Driving a motor vehicle, trailer or engineering plant of any class or description on a road at a greater speed than the prescribed maximum speed limit in respect of the road under this Act constitutes an offence and the punishment is provided by the Act.
vi. It is an offence to drive while disqualified or without driving permit and the punishment is provided therein.
vii. Moreover, careless or inconsiderate use of motor vehicle, speeding or driving while disqualified or without driving permit is an offence under this Act and the punishment is provided accordingly.
viii. The Act also provides for an exception to the driver of an authorized emergency motor vehicle, trailer or engineering plant to exceed the prescribed speed limit, park or stand in any place whether or not that place is a parking place, in disregard of any regulation governing direction of movement, etc.
ix. The Act further provides for compulsory stopping at railway crossings, duties of drivers in case of accidents, restriction on pillion riding, riding in a dangerous position and obstructing a driver of a motor vehicle, etc. and the punishment for contravening these provisions is specified therein.

3.5.2 Driver Training, Testing and Licensing

This is covered by Part IV from sections 37 to 59 of the Act as follows:

i. It prohibits driving without a valid driving permit.
ii. It also provides for grouping of motor vehicles, etc. for driving permits which are categorized into 12 groups for various motor vehicles.
iii. Moreover the issues of licensing of driving schools and instructors are also provided by the Act.
iv. It further provides for the requirements to be fulfilled before one is granted with a driving permit such as driving tests, etc.
v. It also provides for the requirements to be complied with for one to be granted with a driving permit for public service vehicles.
vi. Moreover the Act in this Part provides for the circumstances in which a driving permit may be cancelled or suspended.

3.5.3 The Uganda Road Fund Act

The Uganda Road Fund Act, 2008 establishes the Uganda Road Fund. The functions of the said Fund, among others, is to finance the routine and periodic maintenance of public roads in Uganda, to ensure that public roads are maintained at all times, and to advice the Minister, in consultation with the Minister responsible for roads and the Minister responsible for local governments on the preparation and efficient and effective implementation of the Annual Road Maintenance Programme and the control of overloading of vehicles on public roads.

3.5.4 The Uganda Roads Act

This law was enacted for the purposes of creating road reserves on public roads in Uganda and the authority empowered to declare road reserves is the Minister responsible for roads in Uganda. The law requires the road reserves to be kept clear and any person who interferes with road reserves

commits an offence and he will be issued with written notices to pull down or remove the building or erection, or to cut down or uproot the tree or crops, or to alter or repair the cattle path, bicycle track, side road or entrance or means of access or to close the same as the case may be. Failure to do so is an offence. The road authority may dig and take away materials from a road reserve.

3.5.5 The Uganda National Roads Authority Act

This Act establishes the Uganda National Roads Authority which among others is responsible for the management of the national roads network, to maintain and develop the national roads network, to advise the government on policy matters concerning roads generally, to collaborate with international organizations, intergovernmental organizations and agencies of other states and the private sector on issues relating to development and maintenance of roads, etc.

3.6 Zanzibar

Zanzibar, which is part of the URT, has its own government and ministry responsible for transport matters.

3.6.1 Principal Legislation

The Road Transport Act, 2003

This is the main law that governs the issue of road safety in Zanzibar. The Act is divided into XI Parts. Part VII has provisions relating to safety and traffic management. In relation to road safety, this Part provides the following:

i. It requires drivers of vehicles to observe all rules for the guidance of drivers, which may be prescribed, and failure to observe them may lead to civil or criminal proceedings.
ii. The Act also creates as an offence for causing death by reckless or dangerous driving, and the punishment is provided.
iii. Moreover, the Act has provisions relating to reckless and dangerous driving generally as well as careless and inconsiderate driving and over speeding which are all regarded as offences and the punishment is also provided.
iv. Also it shall not be lawful for a public service vehicle to carry greater number of passengers than it is licensed to carry.
v. Furthermore, it shall be unlawful for a motor vehicle or trailer to carry a load that will make it exceed its maximum gross weight allowed by an examining officer.
vi. It is further prohibited to drive, or to be in charge, when under the influence of drink or drugs or with alcohol above the prescribed limit or even driving under the minimum age.
vii. On the issue of promotion, competition, trial of speed, or race involving the use of vehicle on public roads, this will take place with the previous written approval of the minister.
viii. It shall not be lawful for any person to use or permit or cause to be used a hand held mobile phone while driving a motor vehicle on a public road.
ix. Also no person shall drive a motor cycle or carry a passenger on a motor cycle unless both of them are wearing a protective helmet.
x. Likewise, no person shall operate a passenger car on a public road unless the front seats are fitted with seat belts which comply with the prescribed specification, and

any person using the front seat of a passenger car where safety belts are fitted must wear such belts.

xi. It shall not be lawful for more than one person, in addition to the driver to be carried on a two-wheeled motor cycle, nor shall it be lawful for any such person to be so carried otherwise than sitting astride the cycle and on a proper seat securely fixed to the cycle behind the driver's seat.

xii. For offences connected with bicycles, no person shall ride a bicycle or tricycle on a public road which is not in a roadworthy condition as shall be prescribed, etc.

xiii. Also, other issues, such as, traffic signs, emergency traffic signs, pedestrian crossings, placing of road humps and other speed breakers, restriction on placing of ropes, road humps across the road, etc. have been addressed by the Act.

3.6.2 Driver Training, Testing and Licensing

This is covered by the provisions of Part VI of the Act, which is on Testing and Licensing of Drivers of Motor Vehicles as follows:

i. A person shall not drive on a road a motor vehicle of any class or description unless he or she is the holder of a valid driving license authorizing him or her to drive motor vehicle of that class or description.

ii. For the purposes of issuing driving licences, motor vehicles shall be categorized into 10 classes and also the minimum age for each class is provided.

iii. The Act also provides for the procedures to be followed in making an application for a driving licence as well as the requirements to be fulfilled such as to produce a certificate of competence, to pass a driving test, etc.

iv. The Act further provides for the circumstances in which the licence may be revoked or suspended.

3.6.3 Zanzibar Roads Authority Act, 2011

This Act establishes the Zanzibar Roads Authority. The objectives of establishing this authority shall be to manage, regulate, detail plan, construct and maintain the roads with due cognizance of cost effectiveness, and modern management practices and techniques to ensure road safety.

3.7 Convergences and Divergences

Generally speaking, the laws that govern road safety in the Partner States are more or less the same almost in all areas with minor differences. The said laws on road safety have similar provisions in relation to the following main areas:

i. Registration of motor vehicles.

ii. Training of drivers and testing together with the whole process of issuance of driving licences.

iii. The use of motor vehicles on roads and maximum limits and means of loading.

iv. Traffic signs and signals control.

v. Compulsory requirement of insurance

vi. Enforcement mechanisms

However, the same laws have some differences in some of the areas, namely,

i. In Kenya the provisions on the use and control of passenger service vehicles, are detailed and there are elaborate requirements with regard to weights and dimensions of vehicles, body construction, conduct of drivers and conductors and carrying of

inflammable liquids or substances in those vehicles. It is apparent that in Tanzania and Uganda such requirements are contained in other laws or regulations.

ii. In Kenya and Uganda, there is no restriction against night operations in respect of passengers' service vehicles whereas in Tanzania, passengers' service vehicles are not allowed to operate during the night that is between midnight and 6.00 a.m.

iii. Inspection of vehicles' road worthiness is required in some of the countries but not in all Partner States. Road worthiness inspection of vehicles is required for all vehicles in Tanzania and Uganda but for Kenya this applies only to passenger service vehicles.

iv. Speed limits restriction is not the same in the Partner States. Each Partner State has prescribed different speed limits for various places within the country. A good example is Tanzania where the maximum speed for driving in non-built up areas is 80 kph for PSV vehicles exceeding 3.5 tonnes and in built up areas is 50 kph for all vehicles. In Kenya and Uganda there is general speed limit of 100 km/hr in addition to prescribed speed limits for PSV and goods vehicles.

v. There exists a great disparity in the number of institutions responsible for enforcement of the traffic legislation and particularly road safety provisions.

3.8 Recommendations

Harmonization of road safety laws and regulations in the Partner States is of utmost importance in order to have more or less the same standards for the whole of the region. The implementation of the actions summarized in Table 6 in order to achieve harmonization is recommended.

Table 6: Summary of laws to be harmonized and/or improved

	Issue	Practice	Recommendation
1	Road safety lead agency	Coordination is weak because of legally weak lead agency	• Legally mandate the Ministry with responsibility for road safety to take the lead and to coordinate road safety work through a National Road Safety Authority/Agency
2	Road safety funding	Inadequate and erratic allocations to road safety work	• Provide for sustainable funding for road safety activities. The fund should be protected legally.
3	Blood alcohol content when driving	• 80 mg to 100 mg of alcohol per 100 ml of blood allowed – this is too high. • Some restrict drivers of PSV to zero alcohol blood content while driving while others do not.	Harmonize permissible BAC as follows: • PSV drivers maximum: 0.00 mg/100 ml of blood • Motorbike riders and young drivers (less than 25 years old) maximum of 20 mg/100 ml of blood • All other drivers maximum 50 mg/100 ml of blood.
4	Speed limits	Speed limits by vehicle class and road type	Legislate maximum speeds as follows: • On dual carriageway: 110 km/hr rural, 60 km/hr urban • On Single paved carriageway: 100 km/hr

			– rural, 50 km/hr – built–up areas including settlements • Gravel roads: 60 km/hr – rural, 30 km/hr urban • School and residential zones : 30 km/hr • PSV and HGV: 80 km/hr
5	Driver licensing and vehicle inspection	Improperly trained/licensed drivers and poorly maintained vehicles using the public roads	• Harmonize driver training, testing and licensing. Special attention on motorbike drivers/riders • Harmonize the deduction of points, penalties and permit suspension and cancellation system • Harmonize vehicle inspection law and modernize vehicle inspection system
6	Use of helmets by motorbike and cycle riders	• The law is not comprehensive. • Low wearing rates for hygienic and awareness reasons	• Amend the helmet laws so that every rider and passenger of a cycle (motor and pedal) on a public road be required to wear approved helmet • For health reasons provide for the wearing of smart head cover which is disposable under the helmet. Require the covers to be provided by the riders and disposed of in accordance with environment regulations.
7	Use of mobile phones by drivers while driving	Some States prohibit while others allow the use of mobile phones while driving	• Harmonize legislation: prohibit the use of mobile phones by drivers, riders, cyclists and pedestrians when moving on a public road.
8	Use of ICT in enforcement	The use of ICT in Partner States is very low and the law is not comprehensive	• Legalize the use of cameras for detecting speed limit violation and red-light running.
9	Driving hours	Service hours for intercity PSV are restricted in Tanzania	• Service hours for PSV should be harmonized - allow 24 hours service for intercity buses in all Partner States • Enforcement of driver working hours for PSV should be harmonized (maximum 8 hours within 24 hours as required by labour law)
10	The use of seatbelts and child restraints	Inconsistent legislation and low wearing rated in Partner States and unavailability of child restraint seats.	• Harmonize legislation: drivers and all passengers are required to wear seat belts. • Introduce legislation for child restraint and take measures to increase availability of child restraint seats.

11	Safety of the road infrastructure	Inconsistencies in design and traffic control. Limited practice of treating hazardous road locations and road safety audit (RSA).	• Harmonize RSA laws – require RSA for proposed and existing roads and traffic management projects. • The law to require Road Authorities to treat hazardous road locations

4. ROAD SAFETY STRATEGIES, PROJECTS AND ACTIVITIES

4.1 Introduction

This chapter addresses project objective 3.4 item (ii) of the ToR namely to identify viable strategies, projects and activities leading to the stemming of the high incidence of traffic crashes in the region. On the basis of the situational analysis and risk factors presented in Chapter Two and the review of road safety laws in Chapter Three the strategies listed in Table 7 were identified. This chapter describes and justifies the potential strategies and projects and outlines the implementation activities and costs.

Table 7: Strategies to manage road traffic crashes in the Partner States

S/N	Identified weakness / Risk factor	Proposed strategy
1	Rampant violation of road safety regulations (speed limits, helmet and seat belt wearing, driving while exceeding BAC, use of mobile phones while driving, etc)	Harmonize/improve legislation, systematic information campaigns and enforcement
2	Lack of funding, capacity and ineffective coordination of road safety work	Institutional reform and capacity building for effective road safety management system
3	Low quality and poor access of road safety data	Improve the quality and accessibility of road safety data
4	Lack of knowledge of the social impact of crashes and effectiveness of interventions	Systematic road safety research and regional and international collaboration
5	• Improperly trained, unlicensed drivers contributing to crashes • Defective vehicles contributing to crashes	• Improve driver training, testing and licensing system • Improve vehicle inspection and certification system
6	Unsafe use of roads by all road users (due to poor attitude, inadequate road safety knowledge)	Road safety education in schools
7	Unsafe and inadequate para-transit services in urban areas	Improve public transport supply and safety
8	High involvement of VRUs in traffic crashes	Improve: • Land use planning • Road network management
9	Poor RTI victim rescue, first aid and access to emergency medical services	Improve pre-hospital and hospital trauma management services
10	Increasing use of motorcycles and involvement of riders in fatal and serious injury crashes	Improve rider training and reduce infrastructural risk factors

The strategies taken together will achieve to a great extent the goal of stemming the high incidences of RTI in the region.

4.2 Systematic Information Campaigns and Enforcement

***The strategy**: Harmonize / improve road safety legislation, systematic information campaigns and enforcement.*

This strategy includes passage/amendment of legislation to harmonize the road safety laws and regulations. Legislation will also include improvement of the laws to bring them up to international

best practices where applicable and revise penalties to make them deterrent. The laws to be harmonized and improved under this strategy include speed limit law, prohibit driver use of mobile phone when driving, limits of blood alcohol content for drivers, wearing of seatbelts, child passenger restraint and wearing of standard helmets. Campaigns to raise the public awareness of these interventions and enforcement to ensure change of behaviour are central to the success of this strategy.

There are currently objections to 80 km/hr speed limit for intercity PSV as the owners wish to maximize vehicle utilization and passengers wish to arrive at their destination in the shortest possible time. However, mobility should not be achieved at the sacrifice of human life. Speed management is the crucial element in the prevention of RTC and those who raise such objections need to be made aware of the importance of controlling speed for the safety of passengers using PSV. Users of motorbikes as means of public transport also argue against the use of helmets on hygiene grounds. One way to overcome this is to introduce the use of disposable head covers for the passengers who have to use same helmet one after another.

Promotion of drinks with alcohol content detrimental to the driving task by the industry need to be counteracted by the promotion of the necessity to restrain from drinking beyond limits of BAC specified to ensure safe driving. Driver fatigue should be addressed by enforcement of the labour law with information campaign. Public should be sensitized on the consequences of violation of authorized loading limits for public service vehicles and other commercial vehicles and violators should be punished according to the existing laws.

This strategy should be given the highest priority during the first five years as it has the potential of producing quick gains and demonstrating to the public that every road user must contribute to the targeted reduction of RTI on our roads. The combination of systematic information campaign and enforcement is particularly effective in the long run rather than if each is implemented independent of the other. The strategy need not wait for the amendment of legislation. Current regulations should be given enough publicity followed by enforcement and evaluation. The same approach should be taken when proposed amendments become effective. Rwanda and Burundi professionals rated highly the effectiveness of the enforcement of the road safety laws (speed, helmet and seat belt wearing and BAC) in comparison to the other Partner States as reported in Chapter Two. Available information show that Rwanda's RTI fatalities trend is decreasing while the other Partner States are increasing. This success is based on very serious enforcement effort with full political support at the highest level. Success reported for Kenya in 2004 and 2005 was attributed to public support of newly introduced regulations. The support from the public was no doubt due to publicity given to the new regulations. The strategy has thus proven effective within the region and should be implemented more widely, in a systematic manner and sustained over time to produce tangible results. However, the need to use ICT based enforcement especially for speed and red-light running enforcement cannot be over-emphasized given the generally acknowledged high levels of corruption most of the Partner States.

The purging of the traffic police to remove corrupt elements (this is believed to be the basis of success in road safety effort in Rwanda), their training and motivation are essential to success.

It is estimated that this strategy has the potential to reduce RTI fatalities by at least 20 percent in the first five years. For Rwanda systematic information campaign and enforcement is essential to maintain the trend but the expected reductions due the strategy may not be as large as in the other Partner States because of the current high level of effective enforcement. Thus Rwanda needs to focus on coordinated road safety work with significant involvement of the infrastructure and health sectors.

Potential projects

Potential projects under this strategy include:

i. Legislation – harmonizing road safety laws
ii. Enforcement: seatbelt, speed and red light running management project (with special emphasis on the application of ICT), do not drink and drive
iii. Standard helmets project

Actions under the strategy are summarized below**:**

ACTION	LEAD PARTNER	PROJECT LEADER	OTHER PARTNERS	TARGET DATE
Promote road safety as a government core business: Raise awareness of the importance of road safety at the highest levels and hence create and sustain political support (will)	Lead Ministry for road safety activities	CEO Road Safety Agency/Authority	Ministry of Home Affairs, Ministry of Health	Starts immediately
Draft amendments to road safety laws to conform to harmonization requirements. Seek Parliament approval.	Ministry with the mandate	Director with the mandate	To involve all stakeholders	By the end of the first year
Stepping-up the enforcement of road safety laws and coordinate with road safety campaigns Remove corrupt elements from the force Train and motivate corruption free traffic police	Traffic police	Traffic Police Commander	Road Safety Agency/Authority	Immediately
Procurement of speed governors, motorbikes, motorcars breath analyzers and other equipment dedicated traffic law enforcement	Ministry with the mandate*	CEO Road Safety Authority/Agency*/	Traffic Police	By the end of the first year and annually
	**The procurement process may be done by the Road Safety Authority or the Ministry of Home Affairs depending on how quickly and efficiently the process can be completed.*			
Planning and	Road safety	CEO/Road Safety	• Traffic Police	Immediately

implementation of information campaigns: • Do not exceed the speed limit • Do not drink/use drugs and drive • Wear seatbelts – all motorists • Use standard helmets – riders and all passengers • Others	authority/agency	Agency/Authority	• Businesses • NGO *Learn from GRSP approach - involve businesses and NGO	and at least four times each year
Technology based enforcement (speed cameras etc) through PPP[1]	Ministry with mandate for the road network	CEO National Roads Agency	• Ministry of Home Affairs • Businesses	System to be commissioned by the end of the 4rd Year
Develop standards and ensure availability of standard tropical helmets and introduction of disposable head covers	Lead Ministry for road safety activities	CEO/Road Safety Authority/Agency or Director with the mandate	• Bureau of Standards • Businesses • User associations	By the 3rd year

[1]One possible arrangement is for a private company to install and operate the system and take fifty percent of the fines while the rest are paid into the Road Safety Fund.

4.3 Institutional Reform, Capacity Building and Sustainable Funding

The Strategy: *Institutional reform, sustainable funding and capacity building to develop an effective road safety management system*

This is the most critical strategy as far as long term sustainable focus on results is concerned. This includes mandating one ministry to act as the lead ministry for road safety vision and activities, the establishment and capacity building of a Road Safety Authority/Agency, institutional reform for efficiency and effectiveness, strengthening of coordination and securing of sustainable funding.

Potential projects

i. Establishment of an effective Road Safety Authority/Agency
ii. Establishment of sustainable road safety fund
iii. Establishment of other agencies / strengthening of institutions delivering road safety management functions
iv. Capacity building

Actions under this strategy are summarized below:

ACTION	LEAD PARTNER	PROJECT LEADER	OTHER PARTNERS	TARGET DATE
Appoint one ministry to assume leadership of road safety policy and	The President of each Partner State	Permanent Secretary – Ministry responsible for		1st Year

activities		Road Transport		
• Review road safety management system • Establish a National Road Safety Agency/Authority • Streamline institutional set-up for road safety activities	Lead Ministry for road safety activities	The Permanent Secretary of the Lead Ministry	Ministries with responsibilities for road safety actions.	1st and 2nd Years
Establish Road Safety Fund	Lead Ministry for road safety activities	The Permanent Secretary of the Lead Ministry	Ministry of Finance	2nd Year
Build capacity to plan and implement road safety interventions	Lead Ministry for road safety activities	CEO National Road Safety Agency/Authority	Ministries/Agencies with responsibilities for road safety actions.	Continuous
Develop and publish a five year National Road Safety Strategy based on the Framework for the Development of an East African Road Safety Master Plan	Lead Ministry	CEO National Road Safety Agency/Authority	All stakeholders	By the end of 2nd year

4.4 Improve Road Safety Data Management

Strategy: *Improve road safety data management*

This strategy will address the existing inadequacies in road safety data recording, quality, accessibility and linkages. The strategy should facilitate making the fatalities data comparable by all Partner States adopting the 30 day definition of RTI fatality and ensuring that all fatalities occurring within this period are entered into the database with all relevant information. At least all data involving RTI should be reported. This should be adopted across the Partner States and similar traffic crashes information system should be adopted.

Potential projects

Road safety database project

The components of the database include the RTI data (fatalities, serious injuries and slight injuries), and the details of each crash usually collected at the scene and the outcome of those hospitalized after 30 days. Police forms used for this purpose shall be improved to capture the minimum required information. This is especially true for Burundi where the road user casualty by type (pedestrian, cyclist, driver, passenger etc) is not available. The link between police and hospitals treating the casualties need to be established or strengthened so that police receive the outcomes of all the casualties after thirty days from the date of the crash.

Location of the crash should be precisely recorded to help road agencies identify hazardous road locations for treatment. Link of the database to motor vehicle registration and driver licence databases is recommended.

Actions under this strategy are summarized below:

ACTION	LEAD PARTNER	PROJECT LEADER	OTHER PARTNERS	TARGET DATE
Develop and establish a common Traffic Crashes Information System (TCIS) across the Partner States	EAC Secretariat	Director for Infrastructure of the EAC Secretariat	Road Safety Agencies and Traffic Police Commanders across Partner States	Develop system in the first year Establish system in the second year
Establish reporting links with hospitals to capture every death due to RTI within 30 days of the crash	Lead Ministry	CEO Road Safety Agency/Authority	Ministry of Home Affairs Ministry of Health	First year
Revise road crash report form to include relevant information for research and road improvement	Lead Ministry	CEO Road Safety Agency/Authority	Traffic Police Stakeholders	First year
Computerize crash database. Involve road agencies to ensure relevant data is entered into the database within two weeks of the crash.	Lead Ministry	CEO Road Safety Agency/Authority	Traffic Police Road Authorities/Agencies	Second year
Institute monthly analysis of road crash data and dissemination of results including black-spots and road user groups with above average risk.	Lead Ministry	CEO Road Safety Agency/Authority	Traffic Police Road Agencies/Authorities	Third year

4.5 Improve Road Safety Research

Strategy: *Improve road safety research, dissemination, regional and international collaboration. Promote evidence based road safety decisions and actions*.

Universities and research institutes have been conducting research in the Partner States. However, the research is un-coordinated and has no focus on results in practice. It is therefore necessary to establish research needs, funding and priorities, a mechanism to coordinate research and disseminate research results to executing agencies. There is also a need to exchange information among Partner States and promote international technical cooperation.

Potential project: Research coordination and capacity building project

Actions under the strategy are presented below:

ACTION	LEAD PARTNER	PROJECT LEADER	OTHER PARTNERS	TARGET DATE
Identify research issues	Lead Ministry	CEO Road Safety Agency/Authority	ALL Stakeholders	First year
Identify research institutes and their capacity / capacity building needs			Research Institutions	First year
Contract out research projects including capacity building component for the executing institution. Carry out the research.			Research Institutions	2nd Year
Review and disseminate research findings. Ensure that research findings are applied in the planning of road safety actions.			All Stakeholders	Fifth year
Identify collaborating/information sharing institutions within and without EAC Identify issues and modalities of collaboration Participate in road safety conferences and organize own conferences/seminars targeting at increasing capacity to plan and implement interventions			Collaborating organizations	2nd Year

4.6 Driver and Vehicle Examination and Licensing

Strategy: *Driver and vehicle examination and licensing to ensure that only competent drivers and roadworthy vehicles operate on the Community's road network.*

Road traffic crashes may be reduced by minimizing driver error and vehicle defects through improved driver training, examination and licensing and vehicle inspection and certification of road worthy vehicles.

Potential projects

- Vehicle inspection and licensing project
- Driver testing and licensing project

Actions to implement the strategy include:

ACTION	LEAD PARTNER	PROJECT LEADER	OTHER PARTNERS	TARGET DATE
Adopt/develop a harmonized vehicle inspection and certification system	Minister responsible for Transport	Director with the mandate	Ministry of Finance Ministry of Home Affairs	1st year
Establish and operationalize vehicle inspection and certification system including inspection centres	Minister responsible for Transport	Director with the mandate	Ministry of Finance Ministry of Home Affairs Businesses	2nd year
Adopt/develop harmonized driver training and testing system	Minister responsible for Transport	Director with the mandate	Ministry of Finance Ministry of Home Affairs	1st year
Establish and operationalize driver training and testing system	Minister responsible for Transport	Director with the mandate	Ministry of Finance Ministry of Home Affairs Businesses	2nd year

4.6 Road Safety Education

Strategy: *Improve road user knowledge, attitude and skills in safe use of roads and respect for all road users through education in schools*

Education in the first fourteen years of life contributes in a big way in the formation of life-long attitudes. Proper attitude towards safe use of roads is very important life skill and should be imparted early on in life. There are many issues being squeezed into school curriculum including awareness about our environment, HIV/Aids awareness among others. Educators are expected to find the best way to include these life skills in primary and secondary schools curriculum to ensure that safe behaviour and attitude to all road users as well as knowledge and respect for the law are developed at an early age. Cycling skills and the use of the road as a pedestrian should be emphasized.

Potential project: Road *safety Education in Schools and Teacher Training Colleges*

Actions under the strategy are listed below:

ACTION	LEAD PARTNER	PROJECT LEADER	OTHER PARTNERS	TARGET DATE
Review current status and formulate the way forward to remedy gaps in road safety education at Primary, Secondary and Teacher Training levels	Ministry of Education	Director/Institute responsible for curriculum development	National Road safety Agency/Authority	1st Year
Develop and publish improved road safety education component of the curriculum at the three levels	Ministry of Education	Director/Institute responsible for curriculum development	Stakeholders	2nd year
Implement and evaluate improved road safety education component of the curriculum at the three levels	Ministry of Education	Permanent Secretary	National Road Safety Agency/Authority	Fourth year and onwards

4.7 Improve Public Transport Supply and Safety

Strategy: *Supply of adequate and safe public transport to minimize passenger RTI.*

Inadequate supply leads to overcrowding in buses and poor condition of PSV both of which increase the severity of RTI in the event of a crash. Behaviour of drivers of PSV needs to be improved through better training and regulation in order to minimize the occurrence of crashes

involving PSV. Strict enforcement of existing speed limits for PSV has the potential to prevent occurrence of crashes and reduction of severity of injuries.

Potential project: National Public Transport project

The aim of the project for each Partner State would be to promote investments for delivery of quality public transport in major towns and rural routes and to promote attention to safety and professionalism among operators and drivers as well as the highest levels of enforcement of safety regulations.

Actions under the strategy:

ACTION	LEAD PARTNER	PROJECT LEADER	OTHER PARTNERS	TARGET DATE
Design and implement public campaigns focused on the safety of public service vehicles and users	National Road safety Agency/Authority	CEO National Road safety Agency/Authority	Public Transport Regulator Traffic Police Businesses and NGOs	1st Year and at least once every year
Enforce driving hours, professionalism and work conditions for drivers of PSVs to conform to labour laws and safety regulations and goals	Passenger Service Vehicle Regulatory Agency/Authority	Director with the mandate	Traffic Police National Road Safety Agency/Authority	1st Year Continuous
Create environment for increased supply of quality and safe PSVs for urban and inter-urban routes	Ministry of Transport	Passenger Service Vehicle Regulatory Agency/Authority	Ministry of Finance Local governments Financial institutions Businesses	2nd Year
Ensure that sub-standard PSV are phased out	Ministry of Transport	CEO Passenger Service Vehicle Regulatory Agency/Authority	Traffic Police	From the 3rd year onwards

4.8 Improve Land Use Planning and Road Network Management

Strategy: *Improve land use planning and road network management to provide for the safety of vulnerable road users (VRUs) through shorter routes to services, lower speeds on shared streets and segregated NMT mobility routes*

This strategy is fundamental to improving safety and health of urban dwellers. As planners and engineers develop a road network that marginalizes non motorized transport the safety and health of the urban population is jeopardized since pedestrian and other NMT interaction with motorized traffic involves high risk. Urban dwellers are denied opportunity to walk or cycle which are essential to their health. So more and more vulnerable road users are killed in traffic crashes and at the same time increasing number of people have their life span shortened due to life style diseases related to inadequate physical activities. Provision of separate NMT networks as well as adequate sidewalks and crossing facility in mobility corridors and streets is thus critical for the safety and health of urban population.

Another important consideration in taming the road rage is adequate capacity of the road network to accommodate increasing traffic volumes. Inadequate capacity at critical junctions in urban areas is costing the EAC economies millions of dollars annually due to lost time, environmental pollution, traffic crashes and wasted fuels. The environmental pollution results in shortening of lives of the people running businesses near such junctions and the traffic police who are forced to take over the control of traffic due to excessive traffic volume. Thus upgrading junctions and links to provide adequate capacity is an urgent matter and appropriate actions are recommended below.

Potential projects

- NMT friendly urban planning project
- Safe system road network management projects - for cities and corridors

Actions under the strategy:

ACTION	LEAD PARTNER	PROJECT LEADER	OTHER PARTNERS	TARGET DATE
Develop urban planning guidelines that ensure integration of services, residences and jobs within walking distance of each other. New land use plans to include land reserved for foot paths, cycle paths as well as streets. Institute measures against violation of guidelines and misuse of land reserved for NMT	Ministry of Lands	Permanent Secretary	Local Governments	2nd Year
Upgrade (by paving, widening, protecting by signing and installation of barriers) footpaths in	Ministries responsible for transport and land use planning and	CEO National Road Agency		

critical urban neighbourhoods and along roads where walking space is marginalized	local governments	Directors – Local Governments		
Increase capacity of urban and inter-urban road links and junctions where congestion is a problem	National Roads Agency	CEO National Roads Agency	Local Road Authorities (City, Municipal and Town Councils)	Starts on the second year after establishing priorities
Making critical links and junction safer in urban centres and inter-urban roads by remedying defective features/locations Post speed limits at the beginning of all rural road sections and every ten to fifteen km and on approaches to settlements	National Roads Agency	CEO National Roads Agency	Local Road Authorities (City, Municipal and Town Councils)	Starts in the 1st Year with locations with highest priority
Make it mandatory for all new roads to be subjected to road safety audit and unsafe features to be made safe before authorization of construction and the opening to traffic	Ministry responsible for road network	Director for Roads	Road authorities	Year 2
Construct modern rest areas every 100 to 150 km along all EAC regional routes and heavily trafficked interurban routes*.	Ministry responsible for Road Transport	CEO National Roads Agency		
Modernize PSV terminals – ensure adequate capacity safety and functionality	Local Government			
Provide for segregation of NMT from motorized transport on all mobility routes	Ministry responsible for infrastructure	CEO National Roads Agency		

*Rest areas to include restaurant, police post, wellness centre, Emergency Response Unit (with one ambulance, linked to a District Hospital), sufficient well designed parking spaces for PSV, HGV and other vehicles, inspection area for PSV, facilities for road maintenance, crews may be included as appropriate.

4.9 Improve Pre-hospital and Hospital Trauma Management Services

Strategy: This *strategy focuses at minimizing the consequences of RTI through timely rescue, first aid, transportation to a health facility, treatment and rehabilitation*.

Potential projects:

- Pre-hospital services project – including communication, rescue, first aid and transportation to health facility
- Capacity building at health facilities – including human resources supply and training, facilities and consumables

Actions to implement the strategy include:

ACTION	LEAD PARTNER	PROJECT LEADER	OTHER PARTNERS	TARGET DATE
Establish National Response System: including a central command and an Emergency Response Unit with at least one ambulance in every District Integrate rescue services with the response unit. Train staff to man response units and the system	Ministry of Health	Director with the mandate	Traffic Police Rescue services	2nd year
Publicize the use of the national emergency number to call for ambulance Require owners of public service and commercial vehicles (and encourage private car owners) to provide first aid kits (with gloves) and hand tools to assist in the rescue and help crash victims	National Road safety Agency/Authority	CEO National Road safety Agency/Authority	Businesses	2nd year and thereafter

Increase staffing and facilities of health centres receiving crash victims for treatment Ensure that consumables are available in all health centres receiving crash victims	Ministry of Health	Director with the mandate	Ministry of Finance	1st year and thereafter

4.10 Improve the Safety of Motorcycle Riders and Passengers

Strategy: *Improve safety of motorcycle riders and their passengers by addressing infrastructure risk factors, training and licensing of riders and treatment of victims*.

The mode is very high risk anywhere in the world. Within the region the mode is used extensively to serve passengers on routes without public transport. Wearing of helmets is generally low and the infrastructure has risk factors affecting this group. Their treatment in hospitals is reported to be unfair as they are perceived to disregard safety regulations.

Potential Projects

i. Project to strengthen the training and licensing of motorcycle riders
ii. Project to address specific information needs and infrastructural risk factors for motorcyclist

ACTION	LEAD PARTNER	PROJECT LEADER	OTHER PARTNERS	TARGET DATE
Strengthen the training and testing of motorcyclists: Training manual for riders, testing of riders	Ministry with the mandate	Director with the mandate	Driving schools	Immediately
Information campaign focused at motorcyclists (risk factors)	Lead Ministry	CEO National Road Safety Agency	Businesses Motorcyclists' associations NGO	Immediately
Identify and address infrastructural risk factors for motorcyclists Establish a system for motorcyclists to report problems to respective road agency	Ministry with mandate for road network	CEO National Roads Agency	Local governments	Guidelines by the end of the second year. Address risk factors regularly

Information campaign focused at motor-vehicle drivers to raise their awareness on the presence of motorcyclists	National Road Safety Agency/Authority	CEO National Road Safety Agency	Businesses Motorcyclists' associations NGO	Immediately

5. REGIONAL STRATEGY FOR TACKLING PREVALENCE OF HIV/AIDS IN ROAD TRANSPORT CORRIDORS

5.1 Introduction

This strategy **for tackling the prevalence of HIV/AIDS along the transport corridor in East Africa Community** is intended to provide the framework for pulling together different actors to address the HIV/AIDS epidemic in the road transport corridors across Partner States. The strategy will provide a coordinated platform for implementing interventions that give effect to the recognition of the severity of the HIV/AIDS epidemic along the transport corridor. This strategy will cover a 10 year period from 2012 to 2022.

5.2 Overview of the Epidemic

The East African Community (EAC) covers an estimated area of 2.1 million square kilometres comprising of Tanzania, Uganda, Kenya, Rwanda and Burundi. The region faces significant challenges when it comes to HIV and AIDS. East and Southern Africa are among the regions mostly affected by the HIV epidemic and according to UNAIDS (2009) out of the total number of people living with HIV worldwide, 34% reside in countries of Southern Africa. HIV transmission in EAC states (see Table 8) is primarily through unprotected sex between men and women. According to the Behavioural Surveillance Reports, men who buy sex are an important powerful driving force in EAC's HIV epidemic.

Table 8: HIV prevalence rates for EAC countries

Country	Prevalence rate (adults 15- 49 years)
Uganda	6.5% (5.9% - 6.9%)
Kenya	6.3% (5.8% - 6.5%)
Rwanda	2.9% (2.5% - 3.3%)
Burundi	3.3% (2.9% - 3.5%)
Tanzania	5.6% (5.3% - 6.1%)

Source: UNAIDS Epidemiological Factsheets on HIV and AIDS (2009)

5.3 HIV/AIDS in the Transport Corridors

The association between HIV and human mobility has been documented worldwide. In many parts of the world, higher incidences of HIV were observed in areas with reportedly high migration flows

and situated along major transport corridors. Although the link between mobility and HIV cannot be presented in a clear linear cause and effect relationship, mobility may create conditions which make people more susceptible to HIV exposure. The vulnerability stems from a number of individual, social and environmental risk factors such as the socio-demographic profile, separation from spouse, the disruption of socio-cultural norms, the lack of access to health information and services and poor social support system (UNAIDS 2001).

With socio-economic changes, infrastructure development and improved physical connectivity among EAC countries, population movement is increasing within and across borders generating conditions and circumstances that increase HIV vulnerability especially for the migrant populations and respective communities among the transport paths. There are two major road transport corridors in the EAC region with at least five more under construction as shown in the map below; the northern and central corridors. The northern corridor starts from Mombasa through Kampala-Kigali-Bujumbura to Goma. This corridor passes through Kenya, Uganda, Rwanda, Burundi and the Democratic Republic of Congo. The central corridor runs from Dar es Salaam-Kigali-Bujumbura to Goma. It connects the port of Dar es Salaam in Tanzania with Rwanda, Burundi and Democratic Republic of Congo. Map below shows the Transport Corridors in the East African Countries.

Figure 9: Map showing EAC Transport Corridors

In the transport industry the road sector is generally regarded as the riskiest sector for HIV infection and as global evidence shows truck drivers and other long distance transport operators are extremely vulnerable to HIV infection. Hot spots along transport corridors including truck stops and borders have been associated with unsafe sexual practices both among mobile populations (truck drives and informal traders) and among the sedentary population (people living and working along

the corridor). UNGASS report of 2008 shows the HIV prevalence rate in Rwanda among the general population as 3.1% but significantly high in the transport sector at 16.1%.

Long-distance truck drivers are of particular concern to HIV prevention and care programmes because they travel frequently, often to areas with high levels of HIV and are away from home for long periods of time. Reports have also documented that commercial and casual sex is available at truck stops, border crossing points and major transport hubs. The nature of the working environment of long-distance truck drivers exposes them to risk behaviour patterns. Ntozi et al (2003) report that truckers in Uganda tend to seek commercial female company and engage in sexual activity as a way of reducing their stress resulting from the nature of work they are involved in.

5.4 Efforts to Address the Epidemic

5.4.1 Regional Level Efforts

Commitment to address the epidemic is clearly present at the regional level with the establishment of the EAC secretariat which is responsible for coordinating regional responses to HIV and AIDS. This is also evident in the mission statement of the EAC HIV and AIDS Strategic Plan (2007-2012) which aims to reduce the incidences of HIV infection and its socio-economic impact in the East African region by strengthening and expanding regional integration and harmonization of responses within the EAC Partner States. In addition to that as part of efforts to mitigate the epidemic, the EAC countries have been developing and reassessing regional strategies and joint action plans to combat the spread of HIV within and across its borders as stipulated in Table 9.

Table 9 Regional HIV/AIDS related policies/ strategies and institutions

Policy/ Institution	Objective/ Responsibility
EAC HIV and AIDS Work Place Policy (2008)	- Emphasizes the role of employers in providing their employees with access to HIV/AIDS information and services as well as prevention, care and treatment - Launching of education programmes that are tailored to the specific needs of each group (addressing their situation and vulnerability) - The need to build the capacity of drivers, employers associations and local communities to address the epidemic.
EAC Regional integrated multi-sectoral HIV and AIDS Strategic Plan 2007-2012	- Strengthening expanded regional integration and harmonization within the EAC region - Scaling up access to prevention, treatment, care and support. - Regional integration and harmonization of key regional policies, legislation, plans and interventions. - Strengthening the capacity of networks and

	organizations of mobile populations to address HIV/AIDS related risks and vulnerabilities.
Great Lakes Initiative on AIDS (GLIA) was established as a legal sub regional institution in 2004	- Strengthening collaboration and cooperation between the GLIA countries and agencies in the Great Lakes Region for a coordinated response - Promoting dialogue and sharing of experiences between the GLIA countries - Supporting innovative and catalytic projects responding to priority needs defined by GLIA - In the spirit of the International Partnership Against AIDS, encourage all partners, especially PLWHA, the private sector, NGOs and communities, refugees groups, UN agencies and donors, to participate in an expanded and coordinated response in the Great Lakes Region - Strengthen regional coordination to ensure better use of resources and to mobilize additional financial resources.

Within the EAC region there have also been a number of regional efforts that address the HIV/AIDS epidemic along road transport corridors. Such efforts are those undertaken by the Great Lakes Initiative on AIDS (GLIA) **–** covering Burundi, Democratic Republic of Congo (DRC), Kenya, Rwanda, Tanzania and Uganda. The Regional Outreach Addressing AIDS through Development Strategies (ROADS) project coordinated by Family Health International (FHI) has since 2005 initiated a project designed to reduce HIV transmission, improve care and reduce the impact of HIV and AIDS along major transport corridors in East Africa. It also strives to link the mobile populations and communities along transport corridors to prevention, care, treatment and support services. The project operates in the following countries; Burundi, Democratic Republic of Congo, Djibouti, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda. Within the ROADS project SafeTstops and LifeWorks projects have been carried out. The SafeTstops is designed to create recreational and resource centres offering educational outreach, confidential HIV counselling and testing and a secure place to relax for the truck drivers and other transient workers. On the other hand LifeWorks is an innovative initiative involving regional and local businesses to create jobs for vulnerable women, older orphans and care providers as an HIV prevention and care strategy and gears towards the mobilization of community based organizations in income generation and job creation projects.

5.4.2 Country Specific Efforts

The commitment of the government of the countries in the East African region towards mitigating the effects of HIV/AIDS has been promising with governments adopting multi-sectoral policies to mitigate the epidemic. There is a strong support and endorsement from the highest authorities evident in the launching of the National AIDS Commission in the respective countries and other efforts as documented in Table 10.

Table 10: HIV/AIDS related policies/ strategies and institutions per country

Country	Policies/ strategies/ institutions
Kenya	- National AIDS Control Council formed in 1999 to coordinate a multi-sectoral national response to the epidemic - Kenya National HIV and AIDS Strategic Plan 2005/6 – 2009/10 - Seasonal Paper No 4 of 1997 on HIV – Kenyan government commits itself in creating an environment where AIDS related strategies will be translated into meaningful action to reduce the epidemic - The HIV Prevention and Control Act, 2006 - Vision 2030 and the Medium Term Plan 2008-2012 which aims at reducing the HIV prevalence rates to less than 7.1% by 2012 and to facilitate easy access to ARV treatment for those in need - Kenya National AIDS Strategic Plan 2009/10 – 2012/13 vision is "An HIV-free society in Kenya"
Uganda	- Uganda AIDS Commission, 1992 - Uganda National HIV and AIDS Strategic Plan (2007/08 – 2011/12) - Uganda National Policy Guidelines for HIV Voluntary Counselling and Testing (2005)
Tanzania	- National AIDS Control Programme formed in 1988 to respond to the epidemic - Tanzania Commission for AIDS (TACAIDS) formed in 2001 - Tanzania National Multi-sectoral Strategic framework on HIV/AIDS 2003-2007 - Tanzania Second national Multi-sectoral Strategic Framework on HIV and AIDS 2008 -2012 - Tanzania National HIV and AIDS Communication and Advocacy Strategy - Tanzania National Guidelines for Voluntary Counselling and Testing 2005 - Tanzania Policy on HIV/AIDS, 2001 - The HIV and AIDS Prevention and Control Act, 2008 - Health Sector HIV and AIDS Strategy II (2008- 2012)
Rwanda	- National AIDS Control Program (NACP) - National AIDS Control Commission (NACC) - Treatment and Research on AIDS Centre (TRAC) - National Strategic Plan against HIV/AIDS (2009 -2012)
Burundi	- Counseil National de Lutte Contre le SIDA (to oversee and coordinate implementation of the National HIV/AIDS Action Plan - National Strategic Plan against HIV/AIDS (2007-2011)

A review of HIV/AIDS National Strategic Plans of all Partner States shows that the strategies include plans/efforts to address the epidemic among long distance truck drivers as summarized in Table 11. The strategies are mainly focused on the prevention of HIV infection which includes counselling and

testing, information and education on HIV prevention, access to HIV infection prevention commodities and STI management.

Table 11: Targeting of Truck Drivers in HIV/AIDS National Strategic Plans in EAC Partner States

Country	Targeting strategy in NSP
Burundi	• Promotion of lower risk sexual behaviour, OI treatment, IEC, BCC and condom promotion, VCT • STI diagnosis and treatment
Kenya	• Develop innovative HIV/AIDS prevention, treatment and care strategies • Add HTC and STI diagnosis and treatment among the truck drivers of Kenya
Rwanda	• Sensitization on abstinence, fidelity and condom use • Strengthening of condom social marketing and specifically of female condoms • Prevention activities through IEC, BCC by using mass media channels, peer education, promotion materials, meetings, cultural/sports and conferences
Tanzania	• Increase access to HIV prevention (IEC, condoms, peer education, VCT and STI management services) • Implement guidelines on work place interventions • Develop outreach programmes to include families and communities • Make information available to all mobile and migrant workers in all sectors
Uganda	• Create the necessary political environment and systems to maximize the outputs of regional initiatives targeting mobile populations (GLIA, IGAD, IRAPP project, EAC-AMREF) HIV and AIDS Programme

Countries have also undertaken individual efforts to address the epidemic along major road corridors. The Federation of Kenya Employers in the transport sector (FKE), the Central Organization for Trade Unions (COTU), NACC and other development partners collaborated in setting up integrated service centres at stopovers, refuelling points and rest places along transport routes. The services offered include treatment of STIs, VCT and dissemination of information. In Tanzania an HIV prevention programme at the truck stops along the Dar es Salaam – Zambia highway proved to be consistently effective in positive behaviour change, particularly among long distance truck drivers, their assistants and CSW at various truck stops.

5.5 Rationale and Objective of the Strategy

Since its inception in 1999 the EAC has focused towards promoting regional development by improving connectivity, strengthening competitions and promoting a sense of Community. With the on-going socio-economic changes, infrastructure development and improved physical connectivity among EAC countries population movement is increasing within and across borders, generating conditions and circumstances that increase the HIV vulnerability especially of migrant and mobile populations. Reports have identified some of the circumstances on the road corridors conducive to high risk behaviour. For example, many truck drivers and other mobile workers spend large

amounts of time away from their families and often have multiple partners. These include sex workers and others living along the highway and around truck stops. Local communities along major roads transport corridors are also vulnerable to HIV infection.

The Treaty for the Establishment of the EAC Article 118 calls for Partner States to cooperate in health related activities. The Treaty lays strong emphasis on the joint regional strategies and interventions for the prevention and control of HIV and AIDS in the East African Community Partner States. The aim is to guide the response of the region to the pandemic within the respective countries. It advocates a regional approach where nations work together to develop more effective responses to HIV/AIDS and provides opportunity of strengthening interventions at the regional level through improved coordination, collaboration and partnership between regional organizations and national programs.

The proposed road transport strategy fits well within the EAC regional Integrated Multi-sectoral HIV and AIDS Strategic Plan 2007 -2012 that recognizes that population mobility to a large extent contributes to the vulnerability of the region to HIV and AIDS. This strategy is not solely focused on long distance truck drivers but is meant to help mitigate the HIV/AIDS epidemic for people living and working along major road transport corridors. This is essential since the epidemiology of HIV along transport corridor is not restricted to truck drivers and sex workers. A study carried out by the Ministry of Transport in Kenya (2005) shows that female sex workers engage with a diverse clientele of which only about 30% are truck drivers. The strategy will be effective in addressing the epidemic if it is expanded beyond sex workers and truck drivers to target residents of the corridor and border communities.

5.6 Process Followed in Developing the Strategy

The methodology employed in developing the strategy involved the undertaking of a situational analysis in each of the EAC member countries to establish among other things National HIV/AIDS country strategic frameworks, how HIV/AIDS issues are mainstreamed in the transport sector, available/ongoing HIV/AIDS national and local prevention interventions, platforms for HIV/AIDS care and treatment interventions, testing and treatment protocols and an assessment of VCT services available and issues on access (procedures).

Interviews were also carried out with officials from different key ministries. The ministries include but are not limited to the Ministry of Health, Ministry of Transport, Ministry of Internal Security (Immigration), and other key institutions such as the National AIDS coordinating institutions and local and international NGOs addressing the epidemic in the transport corridors.

This was followed up by an analysis of information collected and the identification of key thematic areas that need to be addressed across all 5 EAC countries. In each country expert meetings were organized to discuss the key thematic areas identified for harmonization and work on the inputs to come up with a regional strategy. The experts' views were collected through expert and stakeholders workshops held between 4th July and 25th July 2011 in all EAC Partner States.

The strategy was thereafter reviewed by the EAC Task Force committee composed of experts from all Partner States that was held in Dar es Salaam Tanzania in September, 2011.

5.7 Overall Outcome of the Strategy

The overall goal of the strategy is to develop a **Regional Strategy for tackling the prevalence of the HIV/AIDS along the major transport corridors in the East African Countries.** The strategy is intended to design and support the delivery of results in the following specific outcome areas:

I. Ensuring accessibility of HIV/AIDS related services
II. Provision of comprehensive TB/STI/HIV/AIDS services
III. Mainstreaming HIV/AIDS interventions into local development plans
IV. Harmonization of key HIV/AIDS care and treatment policies and protocols
V. Development of a regional HIV/AIDS Communication Strategy
VI. Integration of HIV/AIDS in the transport sector
VII. Economic empowerment and HIV vulnerability reduction along the transport corridors
VIII. Setting up a coordination structure
IX. Commitment in addressing the epidemic among Partner States
X. Monitoring and Evaluation
XI. Resource Mobilization
XII. Fostering Public-Private Sector Partnership
XIII. Capacity building

5.7 Components of the Strategy

5.7.1 Strategy Area 1: Ensuring Accessibility of HIV/AIDS Health Services

Key Issues Identified:

- Need to scale up access, prevention, treatment, care and support of TB/STI/HIV/AIDS services
- Developing criteria for the allocation of health services
- Defining kind of health service package to be offered along the corridors
- Developing standard operating procedures to guide the provision of health services along the corridors

Objective 1.1: Increase access to prevention, treatment, care and support of TB/STI/HIV/AIDS services

Documents reviewed and interviews conducted have identified the need to scale up access, prevention, treatment, care and support of TB/STI/HIV/AIDS services along the road transport corridors. According to the GLIA report of 2006 the availability of HIV/AIDS related services along the transport corridors was unevenly distributed with some of the key areas or hot spots being reported as lacking important services. VCT services were generally delivered by 50% of the surveyed facilities. Findings from the report show that VCT services were more often provided at public facilities which were infrequently accessed by long distance truck drivers for a number of reasons among them accessibility and the working schedule of the respective facilities. Although it is evident from the reports reviewed and interviews with experts in the respective countries that efforts are being made in all Partner States to ensure easy access to prevention, treatment and care, the reality is that prevention, treatment and care are not reaching the vast majority of people in need.

Objective 1.2: To develop criteria for the allocation of health services along the transport corridors

The key issue arising from the consultative process is that there is need to scale up access to TB/STI/HIV/AIDS services along the transport corridors in all Partner States. However it was recommended that the scaling up needs to be in line with the key guiding patterns of utilization of health services among truck drivers as identified by the GLIA (2006) report. These are speediness of the services provided; costs; services hours that are compatible with the truckers work schedule and physical accessibility. It is recommended that the facilities should be allocated along the highway and should offer 24 hours services. One of the recommendations coming out from experts and other stakeholders is that as part of the first phase of the strategy to set a 5 year target to have in all of the compulsory stops a service/wellness/resource centre that will provide truckers and the local communities in the area access to TB/STI/HIV/AIDS services. Our recommendation is that the identification of important intervention sites for truck drivers could open up new avenues of reaching them. Cross border sites, weighbridges, customs check points and off loading spot could be identified as key potential intervention sites in providing STI/TB/HIV and AIDS related services and should be the target for locating the service/wellness/resource centres during the first 5 years phase of implementing the strategy.

Objective 1.3: To define health services packages to be offered along the transport corridors

It is also important to capitalize on the Wellness Centres that have been set up by GLIA and other partners working in the corridors. We recommend that the service/wellness/resource centres to use the “Wellness Centre” concept that has been used in other countries in Africa and has proved its success in various other countries in Southern Africa. The Wellness Centre approach involves targeting a package of services specifically to key population groups inside vulnerable space. The key feature of “Wellness Centres” is to offer services at appropriate locations and hours thus ensuring access by those who need services. In Kenya, the North Star Alliance has opened up six centres located at border and truck stops in Burnt Forest, Mai Mahiu, Mlolongo, Mombasa, Namanga and Salgaa. It has also opened up centres in Tanzania, Uganda, Rwanda and Burundi. The centres provide sexual health education, counselling and testing, treatment for drivers and the communities, with which they directly interact, including sex workers.

Objective 1.4: To develop standard operating procedures to guide the provision of health services along the transport corridors

To ensure harmonization of standards for setting up “Wellness Centres” it is suggested to have in place a Standard Operating Procedure that will provide guidance and ensure that all Partner States have a common methodology for service delivery in the established Wellness Centres; mechanisms to ensure quality control and monitoring and evaluation.

Actions to be undertaken

- Increase the number of facilities that could offer long distance truck workers and the surrounding communities with TB/STI/HIV/AIDS services
- Ensure that the facilities are located at all cross boarder sites, weighbridges, custom points, off loading spots and all major "hot spots"
- Consider partners of utilization of health services of long distance truck workers and ensure that facilities providing TB/STI/HIV/AIDS services are open 24 hours
- Adapt the use of the "Wellness Centre" concept in scaling up access to health services along the transport corridors
- Develop Standard Operating Procedures for the "Wellness Centres", which should include the provision of health services and recreation facilities

5.7.2 Strategy Area 2: Provision of Comprehensive TB/STI/HIV/AIDS Services

Key issues identified

- Lack of integrated TB/STI/HIV/AIDS services
- Inadequate provision of STI services
- Availability of TB services is limited to some facilities
- STI treatment is not part of HIV/AIDS service package
- STI services being accessed for a fee

Objective 2.1: To provide comprehensive TB/STI/HIV/AIDS services

The GLIA report (2006) shows that the majority of private/public clinics surveyed at truck stops did not provide integrated STI/HIV/AIDS/TB services. Almost all truck stops, with the exception of Kobero in Burundi, were comprised of public and private health facilities with STI services. STI service delivery usually included screening and treatment. Some surveyed clinics and dispensaries, however, did not provide STI drugs and referred patients for treatment to local health partners, mainly hospitals. The availability of TB services was also limited to some of the health facilities. It was also realized that in Burundi STI treatment was not part of the HIV/AIDS package. STI services were being offered at a fee separate from HIV/AIDS services.

It was emphasized that there is need to have a more comprehensive package in all the designated centres that would provide TB/STI/HIV/AIDS services. Based on the fact that there is biological evidence demonstrating that the presence of other STIs increases the likelihood of both transmitting and acquiring HIV, having STI as part of HIV/AIDS intervention is important and cannot be underestimated. Testing and treatment of sexually transmitted diseases (STIs) can be an effective tool in preventing the spread of HIV. Wasserheit (1992), documents that individuals who are

infected with STIs are at least two to five times more likely than uninfected individuals to acquire HIV infection if they are exposed to the virus through sexual contact. In addition, if an HIV-infected individual is also infected with another STI, that person is more likely to transmit HIV through sexual contact than other HIV-infected persons.

Hence, it is evident that detecting and treating STI may reduce HIV transmission. Studies have also shown that treating STI in HIV infected individuals decreases both the amount of HIV in genital secretions and how frequently HIV is found in those secretions (Fleming, Wasserheit, 1999). Given the high rates of STI reported in several studies[1] carried out along the road transport corridors it is apparent that a strong STI prevention, testing and treatment intervention can play a vital role in comprehensive programs to prevent sexual transmission of HIV. Early detection and treatment of curable STI should become a major, explicit component of comprehensive HIV prevention programs across all Partner States.

On the other hand the importance of TB to the global HIV epidemic is enormous. HIV-TB co-infection is noted to pose a challenge and has been of increasing concern in East Africa. HIV is not only fuelling the TB epidemic but it is also making TB control more challenging. Hence TB is an important disease to target in areas with high HIV infection rates. Because TB is also one of the first opportunistic infections to appear in HIV infected individuals addressing TB offers the opportunity for early HIV intervention. Hence it is important that HIV/AIDS service centres are linked up with TB services and for the case of the transport corridors it is proposed that in all of the spots identified they should be equipped to provide comprehensive TB/STI/HIV/AIDS services.

Objective 2.2: To develop an essential minimum package for HIV and AIDS related services

To ensure that the spots provide comprehensive STI/TB/HIV and AIDS related services it is important that there is an agreed essential minimum package for HIV and AIDS related services that should be provided at these stops. Interventions are being carried out by different institutions/organizations (AMREF, CARE International, Global Fund, National AIDS Control Programs, Truck Drivers Welfare Association, Community initiatives among others) that have different interests and hence there is need to set standards to be adopted by all partners who are interested in working in the transport corridors. Kenya is in the process of developing a minimum package to be used in HIV/AIDS interventions implemented along the transport corridors. This will need to include voluntary HIV counselling and testing, screening and treatment of sexually transmitted infections and other opportunistic infections, prevention measures especially availability of condoms and information, education and communication programs and the management of TB and other illnesses. This is especially important since referrals do not seem to be a suitable option for long distance truck drivers due to lack of time. Hence the strategy should seek to improve the coordination and harmonization of TB/STI/HIV and AIDS interventions and services.

[1] *Ferguson and Morris (2005) report that 15% of 202 truckers along the Mombasa –Kampala route reported being infected with STI during the past 12 months*
IOM (2008) reports that 32% of 100 truckers along the Kampala-Juba route reported having an STI in the past 12 months.

Actions to be undertaken

- Ensure that health facilities including "Wellness Centres" provide comprehensive and integrated TB/STI/HIV/AIDS services.
- Ensure that STI screening and treatment is included in the HIV/AIDS package and is provided free of charge
- Integrate TB services in HIV/AIDS service centres
- Develop a minimum package for HIV and AIDS related services to be provided in all health facilities along the corridors to include voluntary HIV counselling and testing, screening and treatment of sexually transmitted infections and other opportunistic infections, prevention measures especially availability of condoms and information, education and communication programs and the management of TB and other illnesses.

5.7.3 Strategy Area 3: Mainstreaming HIV/AIDS Interventions into Local Development Plans

Key issues identified

- Lack of local development plans that address HIV/AIDS along transport corridors
- No clear plans to ensure the sustainability of Wellness centres
- Quality control of Wellness Centres

Objective 3.1: Ensure that HIV/AIDS interventions along the transport corridors including the Wellness Centres are integrated into local development plans

In all the Partner States there have been efforts to decentralize responses to HIV and AIDS. This is an important aspect which needs to be strengthened and properly coordinated to facilitate proper mainstreaming and integration of HIV/AIDS interventions including the "Wellness Centres" into local development plans. Kenya has started working on that by incorporating the "Wellness Centres" into the National HIV/AIDS five year Strategic Plan. The centres have also taken initiatives to gain cross-sectional cooperation from different partners by securing support from the government, National AIDS Council, transport companies, transport workers and civil societies. This is important especially in ensuring sustainability of the centres after project closure.

In Tanzania the government through the Prime Minister's Office for Regional Administration and Local Government has established a HIV response structure through its "Decentralization by Devolution" covering the entire country with multi-sectoral committees on HIV at district, ward and village levels. Given the complex nature of the epidemic these are considered the most appropriate structures which are close to the communities and which can respond to the specific threats and opportunities at community level. Kenya also has a decentralized system that goes to the province (Provincial Health Sector HIV Coordinating forum) and the District Health Sector HIV Coordinating forum. However, the main challenge with the decentralization process is the limited managerial and technical skills in planning, implementing and monitoring of community specific interventions.

Objective 3.2: Ensure that HIV/AIDS interventions along the transport corridors including the Wellness Centres are linked up with the National Health Systems at the local levels.

Establishing parallel systems and structures for HIV and AIDS will be undermining existing institutions and processes of governance and this will in turn limit the delivery of integrated comprehensive services. Hence, the "Wellness Centres" need to be linked up with the national health system at the local level. The local health management teams should be responsible to monitor and control the quality of services been offered. This can also be an important opportunity of getting the facilities into the government drug procurement system that can take care of ensuring availability of drugs once the programs/projects running the "Wellness Centres" come to an end. It is also an important way of ensuring the sustainability.

Actions to be undertaken

- Advocate for the integration of HIV/AIDS interventions along the transport corridors into local development plans
- Link up of HIV/AIDS interventions along the transport corridors with the health system at the local levels

5.7.4 Strategy Area 4: Harmonization of Key HIV/AIDS Care and Treatment Policies and Protocols

Key issue identified

- Lack of harmonization of health related protocols

Objective 4.1: To harmonize all key HIV/AIDS health related protocols

Given the varied nature of policies and protocols in each of the 5 countries there is a need to harmonize them to facilitate effective implementation of HIV/AIDS interventions. GLIA has worked with the Ministries of Health of the 5 Partner States to harmonize HIV policies and protocols relevant to cross boarder and mobile populations. The following protocols have been harmonized based on WHO guidelines

i. ARVs used in first and second line treatment regimes of adults, adolescents and children.
ii. HIV counselling and testing
iii. Prevention of Mother to Child Transmission (PMTCT)
iv. Post Exposure Prophylaxis (PEP)
v. Treatment of HIV/TB Co-infection
vi. Treatment of TB

Other protocols yet to be harmonized include

i. Treatment for STI
ii. Treatment for HIV/Hepatitis B virus and Hepatitis C virus Co-infection
iii. Palliative/ Home Based Care
iv. Treatment of other Opportunistic Infections (OIs) other than TB

There should be continued efforts to finalize the harmonization of treatment protocols that are yet to be harmonized, since harmonization of these protocols is meant to ensure delivery of HIV care and treatment services to cross boarder mobile groups using common standards and practices. It is of uttermost importance that the above mentioned protocols are harmonized to enable a well strategized approach to addressing the epidemic across the Partner States.

Action to be undertaken

- Harmonization of STI treatment protocol
- Harmonization of HIV/Hepatitis B virus and Hepatitis C virus Co-infection treatment protocol
- Harmonization of Palliative/ Home based care protocol
- Harmonization of the treatment of Opportunistic infections other than TB protocol

5.7.5 Strategy Area 5: Develop a Regional HIV/AIDS Communication Strategy

Key issue identified:

- Lack of a common behaviour change communication framework across Partner States

Objective 5.1: To develop a joint communication framework among Partner States

Health promotion and health education activities rely on a variety of well designed and effective communication and IEC materials to help ensure success. This can only be realized if all Partner States have a common behaviour change communication framework to meet the HIV/AIDS related needs of the populations along the road transport corridors. It is recommended that an evidence-based behaviour and social change communication strategy should be implemented with appropriate communication messages and materials that are linguistically and culturally appropriate and harmonized across the Partner States. The development of the messages should be done through a participatory approach in order to develop a coordinated message strategy with appropriate information content packages in a way that is understandable to populations along the transport corridors.

Actions to be undertaken:

- Carry out a behaviour assessment survey along the transport corridors to establish appropriate communication messages
- Develop communication messages and materials that take into account linguistic differences.

5.7.6 Strategy Area 6: Integration of HIV/AIDS in the Transport Sector

Key issue identified:

- Inadequate integration of HIV/AIDS activities in the transport sector
- Lack of HIV/AIDS policy for the transport sector

Objective 6.1: Ensure that all Partner States have a HIV/AIDS policy for the transport sector

Another area that would need to be looked into is the availability of a HIV/AIDS policy for the transport sector which is missing in some of the Partner States. All countries should strive to have their responsible Transport Ministries design and implement HIV/AIDS sector response. This should be done using the National HIV/AIDS Strategic Framework of the respective countries as the base document on which the sector responses should be developed. The policy is of uttermost importance in providing guidelines and direction of the process of dealing with HIV/AIDS in the transport sector. It will also provide a framework which the transport sector employers and employees will use to formulate HIV/AIDS programs at their workplace. Important elements that need to be included in such a policy among others are: (i) recognition of HIV/AIDS as a critical issue in the transport sector, (ii) provision of pro-active and practical approaches to the prevention of HIV/AIDS, (iii) ensure for the respect of human rights and the dignity of every employer and (iv) setting up an institutional structure to promote and facilitate technical coordination of HIV/AIDS initiatives being undertaken in the transport sector.

Objective 6.2: Ensure that HIV/AIDS prevention interventions are adequately integrated into the transport sector

It was also noted in the consultative discussions that the integration of HIV/AIDS prevention activities in the transport sector should also be done by incorporating HIV/AIDS clauses in the bidding and contract documents. Road contractors should be obliged to allocate a certain amount of the funds for implementation of HIV/AIDS activities, which should be in line with what is stipulated in the transport sector HIV/AIDS policy.

Actions to be undertaken:

- Develop HIV/AIDS policy for the transport sector in the respective countries
- Integrate HIV/AIDS prevention activities in construction bidding documents
- Develop peer education programs at the workplace

5.7.7 Strategy Area 7: Economic Empowerment and HIV Vulnerability Reduction along Transport Corridors

Key Issues identified:

- Vulnerability of girls and women to HIV infection resulting from poverty
- Local communities along the transport corridors lack adequate resources (financial, opportunities and capabilities) to improve their livelihoods

Objective 7.1: Improve the economic situation of local communities along the transport corridors

HIV prevention strategies have historically focused on individual behaviour change and have produced limited results in reducing HIV risk among some vulnerable populations, including girls and women. Literature strongly suggests that economic factors either at the household or individual level contribute to girls and women's HIV risk and vulnerability (Hallman, 2005; Turmon, 2003; Weissman et al, 2006). Emerging evidence suggests that economic strategies may contribute to some improvement in some economic and health outcomes among women (Dworkin and Blankenship, 2009). Empowerment as defined by Kobeer (1999) is the ability to make strategic choice where that ability did not previously exist. According to Mathotra and Schuler (2005) it includes 2 essential components:

i. Resources (not only financial and productive assets but also opportunities, capabilities, social networks and other environmental factors) and
ii. Agency or the ability to act in one's own interest

Objective 7.2: Integrate economic empowerment models into the HIV/AIDS prevention agenda

The key message put forth is that any efforts to reduce HIV infection rates successfully should take poverty into consideration. Hence, in addition to the provision of comprehensive TB/STI/HIV/AIDS services partners working in the transport corridors should work with local communities to improve not only income levels, but also skills and capacities to enable the local communities make independent sexual choices. The aim should be to focus on mainstreaming the economic empowerment model into HIV and AIDS local, national and regional agendas.

Actions to be undertaken:

- Mobilize economic empowerment models into HIV/AIDS agenda
- Ensure that HIV/AIDS interventions along the transport corridors address the economic vulnerability of local communities along the transport corridors

5.7.8 Strategy Area 8: Setting up a Coordination Structure

Key issues identified:

- Lack of a coordination structure to oversee the implementation of HIV/AIDS activities along the transport corridors

Objective 8.1: To develop a coordination mechanism to adequately oversee the implementation of HIV/AIDS activities in the transport corridors

Given the presence of multiple development partners, national and international organizations working on HIV and AIDS along East Africa Community transport corridors there is need to provide an institutional framework that will facilitate coordination, information sharing and building synergy among programmes so as to have greater impact on the efforts done to mitigate HIV and AIDS along the transport corridors. At country level we are suggesting that each Ministry of Transport

appoints a HIV/AIDS focal person (in cases where that has not yet been done) who will be responsible to oversee all HIV/AIDS related activities along transport corridors in the respective countries. The focal persons will work closely with their National AIDS Control Councils and Ministries of Health. The focal persons should then be linked to the EAC official responsible for the Transport Sector who should be charged with the responsibility of coordination. It is also important to work on the recommendations of the Partners States of 2008 which proposed for the establishment of regional coordination mechanisms including a multi-sectoral partnership on HIV and MARPs in East Africa which will involve National AIDS Commissions, National and Regional stakeholders as well as international collaborating partners.

Actions to be undertaken:

- Appoint a HIV/AIDS focal person in the respective countries to be housed in the Ministry of Transport
- Developing a reporting system in the respective countries that will be linked to the Health Directorate at EAC

5.7.9 Strategy Area 9: Commitment in Addressing the Epidemic from EAC Countries at all Levels

Key issue identified:

- Get all Partner States and other stakeholders at national and local levels commit themselves to the implementation of the strategy

Objective 9.1: To sensitize and create awareness of the strategy among implementing partners and stakeholders

Objective 9.2: To advocate for the integration of HIV/AIDS activities along the transport corridors in the national HIV/AIDS strategic plans

It is of uttermost importance that EAC countries at the national level are committed and give due importance to the role road transport corridors play in fuelling the HIV/AIDS epidemic. Although policies and protocols are signed at the national level it is critical that leadership at regional and district levels have the same level of commitment since the implementation of activities addressing the epidemic are mainly carried out at this level. Already a number of wellness centres are operating with funding from international partners. However, given the need to ensure sustainability it is important that they are integrated into regional and district development plans. Intervention will only be successful if there is true ownership of the intervention by the local communities.

It is acknowledged that in all Partner States the health sectors are under financed. This has had a negative effect on the effectiveness of the health system in terms of availability of trained health personnel, infrastructure as well as medicine and equipment. Although there is no easy solution in addressing this challenge, the strategy proposes that activities/ plans proposed in the strategy be integrated in Ministry of Health Plans of the respective countries.

Actions to be taken:

- Undertake sensitization seminars among key implementing partners and stakeholders
- Ensure that HIV/AIDS activities/ services along the transport corridors are adequately addressed in National HIV/AIDS strategic Plans

5.7.10 Strategy Area 10: Monitoring and Evaluation

Key Issues identified:

- Lack of adequate data on HIV/AIDS activities been implemented along the transport corridors in the respective countries.
- Lack of data on HIV infection rates along the transport corridors

Objective 10.1: To have in place a monitoring and evaluation system that would collect information on HIV interventions carried along the transport corridors

Monitoring and evaluation of HIV/AIDS interventions along the transport corridors was a significant challenge in many of the Partner States. Data on HIV/AIDS activities being implemented along transport corridors in the respective countries were unavailable and where available were not accessible in a coherent manner. Data on HIV epidemic is critical for planning at regional and national level. Lack of adequate comprehensive data that is comparable across the 5 countries is a major challenge to effective planning for provision of HIV services along the transport corridors. To enable monitoring of progress made, it is important to develop an M& E system that would systematically collect information on HIV interventions carried along major routes in all EAC countries. We are suggesting that the M&E be housed in the Ministry of Transport and during the operationalisation of the strategy M&E activities should be lined up with those in the respective countries to prevent double counting. At the same time we also note that GLIA has developed an M&E framework that can be used in capturing progress made and this would be the most effective approach since all Partner States have been using this monitoring framework for some time now. Hence, it is important that adequate financial resources are allocated to ensure that Monitoring and Evaluation is a continuous process as a mechanism to tracking change and progress made overtime.

Objective 10.2: To undertake a bio-behavioural surveillance to identify baseline HIV prevalence and behaviour

Objective 10.3: To link up Wellness Centres and other health facilities along the transport corridors to the HIV/AIDS national surveillance systems in the respective countries

In addition to the monitoring of the intervention along the transport corridors it was recommended that there should also be efforts to having an epidemiological surveillance system along the transport corridors. Undertaking bio-behavioural surveillance surveys to identify baseline HIV

prevalence and behaviours would provide an opportunity to measure collective trends and impact of implementation.

Actions to be undertaken:

- To utilize GLIA M & E framework to capture progress made along the corridors in addressing the epidemic
- To allocate adequate resources to the M & E units to facilitate undertaking of assigned activities
- Put in place an M&E unit within the Ministry of Transports in the respective countries
- Carry out bio-behavioural surveillances as baseline and thereafter after every 3 years
- Link up the Wellness centres and health facilities operating along the corridors to the HIV/AIDS national surveillance systems in the respective countries

5.7.11 Strategy Area 11: Resource Mobilization

Key issue identified:

- Inadequate resources to effectively implement the strategy and effectively harmonize HIV/AIDS interventions along the transport corridors

Objective 11. 1: To mobilize resources for undertaking the harmonization of HIV/AIDS interventions across Partner States

All Partner States have developed National Strategic Plans as the framework for implementing a multi-sectoral response to HIV and AIDS. In this respect, the EAC Road Transport Strategy for HIV/AIDS will compliment efforts undertaken by individual countries and should not be perceived as something new or out of line with what was set to be achieved in their National Plans. Each Partner State should mobilize resources targeting MARPs along transport corridors in their respective countries and also there should be joint efforts to access funding available from Global Fund, PEPFAR, MAP (World Bank) and other bilateral and multilateral development partners. As part of the resource mobilization process each Partner State should ensure that funds set aside in the contractors bidding documents to support HIV/AIDS intervention in the construction sites should not only be limited to the construction sites but should also be channelled towards supporting the “Wellness Centres” in their respective countries.

Action to be undertaken:

- Integrate HIV/AIDS intervention along the transport corridors into National HIV/AIDS Strategic Plans
- Undertake national resource mobilization for HIV/AIDS activities along the transport corridors
- Undertake regional initiatives to mobilize resources from Global Fund, PEPFAR, World Bank, and bilateral and multilateral development partners.
- Each Partner State should ensure that a percentage of funds set aside for HIV/AIDS interventions in the road construction/rehabilitation sites along the transport corridors is channelled towards supporting the "Wellness Centers" in their respective countries.
-

5.7.12 Strategy Area 12: Fostering Private Sector Partnership

Key issue identified:

- There is great potential for public-private partnership in addressing the HIV/AIDS epidemic along the transport corridors

Objective 12.1: To advocate for public-private partnership in addressing the HIV/AIDS epidemic along the transport corridors

Public-private partnership is needed since no single sector be it the for profit private sector, the not for profit private sector or the government agencies of the public sector has all the skills and resources needed to make impact on its own. Public-private partnership results into complementing skills and resources for accelerated achievement of desired results. It is recommended that the responsible Ministry of Transport in the respective countries should forge partnership with the private sector working in the transport sector as a strategy to increase commitment among the private sector organizations to address HIV and AIDS as a critical workplace issue. This will result into an increased number of workplaces in the transport sector implementing HIV and AIDS workplace policies and programs; private organizations allocating resources to address HIV and AIDS in the workplace and the community they serve and the establishment of comprehensive HIV and AIDS programs.

Efforts can also be directed towards the identification of partner organizations (NGOs, local and international and donor organizations) with the capacity to provide high quality, relevant technical support. Another important strategy that can be taken aboard is building partnership with the private sector clinics and pharmacies to encourage appropriate treatment ensure access to affordable condoms and referrals for VCT, STI and TB services.

Actions to be undertaken

- Mobilize the involvement of the private sector in undertaking HIV/AIDS interventions along the transport corridors
- Develop a network of actors from the private sector (NGO, local and international and donor agencies) to share technical skills and experiences from working in the corridors
- Build up partnership with the private sector clinics and pharmacies to provide comprehensive access to HIV/AIDS related health services

5.7.13 Strategy Area 13: Capacity Building

Key Issues identified:

- Inadequate capacity of actors in implementing HIV/AIDS integration into the transport sector at local and national level
- Inadequate capacity of local partners to respond to the harmonization of HIV/AIDS among Partner States
- Inadequate capacity at the Ministries of Transport in Partner States to operationalize sectoral HIV/AIDS Strategic plans.

Objective 13.1: To build the capacity of the Partner States and other stakeholders at local and national level to adequately integrate HIV/AIDS into the transport sector

Objective 13.2: To build the capacity of the Partner States and other stakeholders at local and national level to adequately respond to harmonization proposals across all Partner States

Objective 13.3: To build the capacity of units within the respective Ministries of Transport to adequately operationalize sectoral HIV/AIDS strategic plans

Capacity building should focus on enhancing the understanding of the interrelationship between HIV/AIDS and the transport sector at national levels and at the local implementation levels. Within the Partner States there are resourses of people and organizations that have the necessary skills to assist with the responses of the epidemic within the transport sector. Ministries of Transport in the respective countries in partnership with the EAC should find ways to mobilize these resources into networks that can facilitate information exchange and collaboration; sharing of best practices and focus on activities that support common regional needs. Capacity building should also be fostered at local levels by building the capacity of local governments, civil society organizations and private sector to ensure effective and harmonized responses. This should also be extended to building the capacity of the Ministries of Transport to address the HIV needs affecting the transport sector and to facilitate the operationalization of sectoral HIV/AIDS strategic plans.

Actions to be undertaken:

- Train partners and stakeholders working along the transport corridors to adequately understand the interrelationship between HIV/AIDS and the transport sector
- Train partners and stakeholders to adequately respond to the proposals of harmonization of the strategy
- Train staff from the Ministry of Transport responsible for the operationalization of sectoral HIV/AIDS strategic plans.

5.8 Implementation of the Strategy

The implementation of this strategy shall involve all Partner States and at all levels from national to the local levels.

In the context of limited resources it can be expected that there will be need to further prioritize certain of the strategy over others. Therefore prioritization within this strategy should be based on the potential impact of activities on the epidemiologically most sensitive behaviour and services. Prioritization should also follow a cost effective analysis on interventions targeting a relatively low cost interventions with broad expected impact.

6. A FRAMEWORK FOR THE DEVELOPMENT OF AN EAST AFRICAN ROAD SAFETY MASTER PLAN

6.1 Introduction

This chapter outlines a framework for the development of an East African Road Safety Master Plan. The framework is based on a road safety management system (RSMS) model and assumes a fifteen year planning horizon as the minimum time it will take to build and consolidate an effective RSMS and reverse the current upward RTI trend. The framework takes into account the road safety situation in the Partner States and the experience of good practice countries which encourages a long term vision well beyond what is technically feasible or institutionally manageable at present. Because it is ethically unacceptable to build a road transport system where many of her citizens will be killed while attempting to fulfil their mobility goals, Partner States should develop successive strategies that will ultimately create a road network with negligible probability for the occurrence of serious or fatal RTI.

The framework takes into account the target of the UN Decade for Road Safety Action launched in May, 2011. The United Nations General Assembly proclaimed the period 2011-2020 as the Decade of Action for Road Safety, with a goal to stabilize and then reduce the forecast level of road traffic fatalities around the world by increasing activities conducted at the national, regional and global levels. Identified strategies included raising helmet and seat belt use, promoting safer road infrastructure and protecting vulnerable road users, such as pedestrians and cyclists. The WHO took the lead role in the launching of the decade. The target is to half the forecasted RTI fatalities and injuries by the end of the decade. The task at hand is to hold governments to their commitments to ensure that action does happen. The framework contributes by setting targets in different areas, sequencing the implementation of the strategies described in Chapter Four and requiring bi-annual reporting at an EAC Forum.

6.2 Road Safety Management System

6.2.1 The Framework

In Chapter Two an outline of the evolution of road safety practice was traced from the focus on crash prone driver to the current safe system thinking. The current thinking is captured by a framework that links the seven institutional management functions to interventions anchored on the road network where road traffic injuries and deaths occur and to the desired results expressed as outputs (milestones, deliverables), intermediate outcomes (e.g. seat belt/helmet wearing rates, average speeds) and final outcomes (e.g. fatality rate per 100,000 population or their absolute numbers).

Table 12 presents the road safety management system. We adapted this framework in outlining the elements of the master plan since it has proven to be an effective tool for the achievement of ambitious targets in a multi-sector approach. A brief description is considered useful but for details one should consult Bliss and Breen (2009).

Table 12 Road safety management system - a framework for managing for results

Institutional management functions	Interventions	Results

Coordination Legislation Funding and resource allocation Promotion Monitoring and evaluation Research and knowledge transfer	**Results Focus**	**On the road network**	Planning, design, operation and use Entry and exit of vehicles and drivers Recovery and rehabilitation of crash victims	• Social costs • Final outcomes • Intermediate outcomes • Outputs

Source: Adapted from Bliss and Breen (2009)

6.2.2 Institutional Management Functions

The seven institutional management functions listed in Chapter Two and described in Bliss and Breen (2009) are elaborated below. It is most important for the lead agency (Road Safety Authority) to have a clear understanding of each function and its role and that of other implementing/complimenting agencies and that it exercises strong leadership and coordination to achieve the intended results.

- **Results focus:** this is a strategic orientation that links potential and actual interventions with results. It include analysis of what can be achieved over time and set performance management framework for the delivery of interventions and their intermediate and final outcomes. It defines the level of safety which a country wishes to achieve expressed in terms of vision, goals, objectives and related targets.
- **Coordination**: concerns the orchestration and alignment of interventions and related institutional management functions delivered by government and related civic and business entities to achieve the desired focus on results.
- **Legislation**: concerns the appropriate legal instruments, where necessary, which specify the legitimate bounds of institutions, their responsibilities and accountabilities, their interventions, and their institutional management functions to achieve the desired focus on results.
- **Funding and resource allocation:** concerns the financing of interventions and institutional management functions in a sustainable way to achieve desired results. Identification of new sources of sustainable funding may be necessary.
- **Promotion:** concerns sustained countrywide communication of safety as a core business of government and the community emphasizing the shared societal responsibility to support the delivery of interventions required to achieve the desired results. Thus promotion includes the systematic targeted information campaign which focuses on the interventions but goes beyond to secure political will and public support for road safety work.
- **Monitoring and evaluation:** concerns systematic and ongoing measurement and evaluation of interventions in terms of achieving the desired road safety outputs and results. This depends on reliable road safety data management system, driver and vehicle registries, periodic survey to establish performance and exposure data. This function includes arrangements for an independent audit, inspection and review.

- **Research, development and knowledge transfer**: concerns the systematic and ongoing creation, codification, transfer and application of knowledge that contributes to the improvement of efficiency and effectiveness of road safety management system to achieve the desired results. It includes systematic research on the nature of the RTI problem, intervention development and evaluation, learning by doing in collaboration with outside experts, information exchanges in various forums.

6.2.3 Interventions

The management functions produce interventions that are anchored on the road network where the deaths and injuries occur. Intervention must target specific corridors and urban areas known to experience or have potential for high frequency of RTI and death. Interventions (measures) identified in Chapter Two can be grouped into the strategies listed in Table 7 and elaborated below (for more information on interventions please consult Peden *et al*, 2004):

i. Planning, design, operation and use of the road network including:
   - Education and information campaigns on the rules for safe use of roads to change road user behaviour
   - Standards and rules/procedures for safe planning, design, construction, maintenance and operation of the road network and governing how it is to be used safely by setting rules that prohibit unsafe behaviour like excessive speed, BAC of drivers and pedestrians, riding without helmet.

ii. Conditions for entry and exit of vehicles and road users to the road network
   - Standards and rules to address vehicle safety standards
   - Standards and rules to address driver licensing requirements

iii. Recovery and rehabilitation of crash victims from the road network
   - Standards and rules for rescue, first aid and transportation to hospital (pre-hospital services)
   - Standards and rules for hospital services
   - Standards and rules for long term rehabilitation of crash victims

iv. Compliance – use of a combination of education, enforcement and incentives to make road authorities, the transport industry, road users and rescue and emergency medical services and rehabilitation services comply with the safety rules and standards

6.2.4 The Results

The results comprise the road safety targets set by the lead agency in collaboration with all mandated agencies in a multi-sector implementation framework. Targets typically include:

i. Outputs – the deliverables or milestones that seek improvement if intermediate or final outcomes, for example, number of police enforcement operations required to cause reduction in average speed or number of vehicle safety inspections or kilometres of roads that received safety treatments etc.

ii. Intermediate outcome – outcomes linked to final outcome improvement e.g. seatbelt wearing rates, proportion of drunk drivers among fatalities, reduction in operating speed etc.

iii. Final outcomes – the long term vision or intermediate target like number of fatalities or fatalities per capita etc

6.3 The Vision, Planning Horizon and the UN Decade for Road Action

Results (vision) need to be set in form of targets for the short-term, medium-term and long-term in a planning horizon. It has been found to be very inspiring to have an ambitious ultimate or distant vision even if it is perceived to be technically and institutionally unattainable at present since it affects how we formulate and implement our plans including interventions and research goals. We recommend a long term objective that is similar to vision zero which has been adopted by the most ambitious good practice countries. Vision zero embraces zero tolerance for serious injury or death as a result of a road traffic crash.

This vision can be adopted by the East African countries regardless of the current situation as it greatly inspires the setting of a right foundation for immediate and future road safety work. The actors should realize that although road traffic crashes and even minor injuries need to be accepted, we need to develop a road safety management system (RSMS) based on a philosophy that do not accept sacrifice of human life or permanent impairment in order to achieve the mobility offered by our road transport system. Construction of unsafe road transport system is ethically unacceptable.

We therefore recommend adoption of a long term objective based on a safe system thinking that do not accept death or serious injury as an acceptable cost for mobility. The ultimate vision should therefore be a road transport system with negligible probability of death or serious injury as a result of a road traffic crash.

> The long term objective or vision is ***a road transport system with a negligible probability of being killed or seriously injured as a result of a road traffic crash.***

With that long term objective in mind the Partner States can adopt a series of targeted plans that incrementally bring the trading block to the realization of its long term objective. For example for the next decade the following goal, consistent with the UN Decade for Road Safety Action, is recommended:

> The goal or vision for the first decade is for each member state ***to half the number of projected RTI fatalities and serious injuries in 2021 compared to projections based on the year 2010 data.***

The targeted reduction in RTI fatalities is based on the projected fatalities and serious injuries for the first ten years rather than on the base year since it is believed to be a more realistic approach for the region. It allows time for the development of capacity during the first decade after which the target to reverse the trend can be set on the basis of the capacity developed during the decade.

Since 1984 there have been several congresses on road safety in Africa (and at global level as well) which made recommendations for action. However, achievements have been limited because fundamental issues have not been addressed. The WHO (2009) report is the first study assessing the situation of road safety across the continent and notes the absence of strong road safety lead agencies, inadequate funding for road safety work and the lack of policies and strategies addressing the risk factors among other weaknesses. Against this background we recommend that the first five years of the programme focus on addressing the basic constraints: institutional reform for road safety management particularly the formation of effective National Road Safety Agency/Authority, addressing sustainable funding and capacity issues, development of policies and strategies and the raising of awareness. This can be coupled with the implementation of the interventions on the most high risk highly trafficked sections of the national routes to achieve targets expected under the UN Decade for Road Safety Action. The strategies listed in Chapter Four are consistent with the Five Pillars of the UN Decade for Road Safety Action detailed in Global Plan (please see http://www.decadeofaction.org/documents/global_plan_en.pdf) namely:

Pillar 1: Road safety management
Pillar 2: Safer roads and mobility
Pillar 3: Safer vehicles
Pillar 4: Safer road users
Pillar 5: Post crash response

The framework for the EARSMP can thus be seen as a tool for implementing the UN Decade for Road Safety Action (2011 to 2010) and beyond.

Figure 10 and Figure 11 illustrate possible future scenarios for two of the Partner States under the business as usual and vision achieved. It is envisioned that the implementation of the strategies will result in continuous reduction of fatalities after ten years for the Partner States (other than Rwanda). Beyond the decade it is expected that consistent implementation of the strategies will result in continuous decrease in number of fatalities thus effectively reversing the trend. For the case of Rwanda it is very probable that after another five years of serious enforcement without complementing measures from the other sectors under an effective coordinating structure the reported (data based on police records) favourable trend may change; hence the need to broaden their approach to the management of road safety.

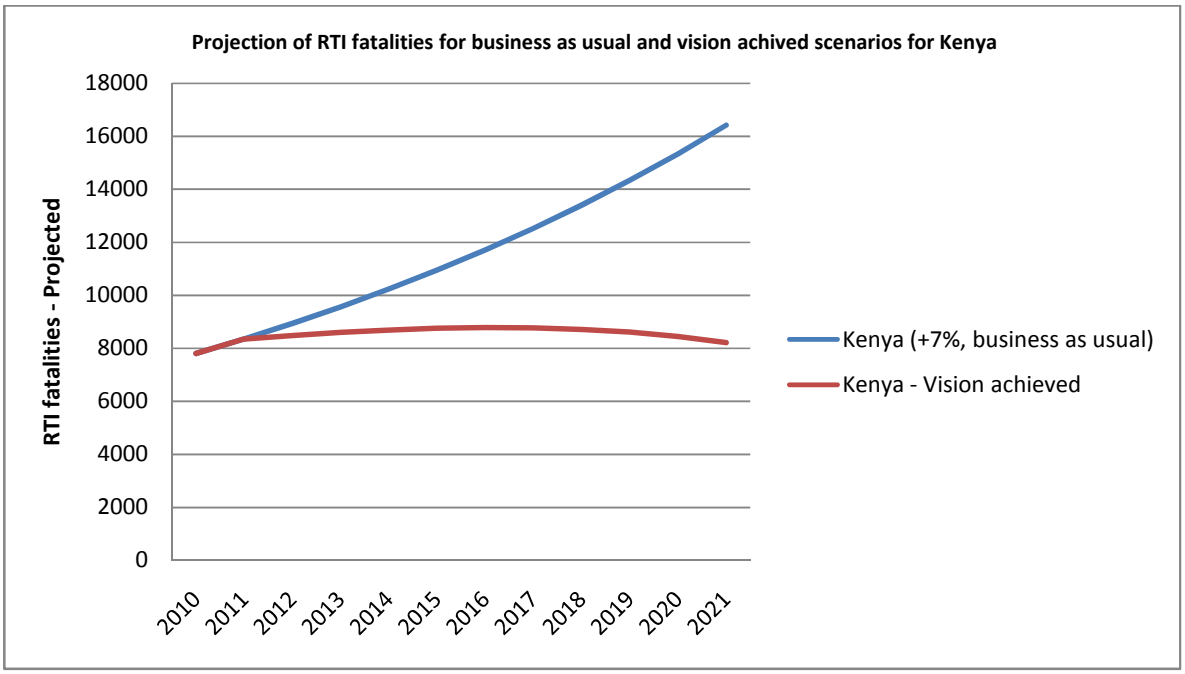


Figure 10: Kenya - Projected RTI fatalities: business as usual and vision achieved scenarios (similar situation in Burundi, Tanzania and Uganda, see Figure 5)

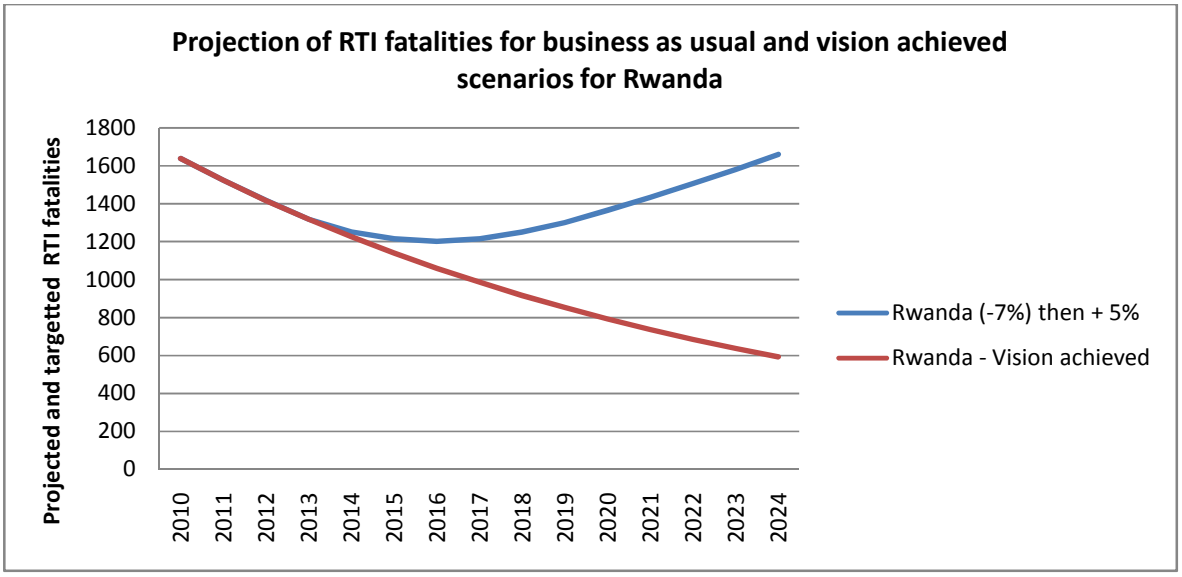


Figure 11: Rwanda - Projected RTI fatalities: business as usual and vision achieved scenarios

We propose that a master plan for the next fifteen years be developed and that the planning horizon be broken into three five year periods. It is envisioned that it will take 15 years to build institutions and systems that are capable of sustainably delivering interventions that progressively reduce the probability of occurrence of serious injury or fatality as a result of RTC. It should be accepted that

the processes are evolutionary and changes should be implemented at any stage to achieve focus on results. We propose the following three phases:

i. 2012 - 2016: The foundation phase or foundation plan:
A basic RSMS is developed with accountability, monitoring and evaluation frameworks and through information and enforcement the number of fatalities is reduced by at least 20 percent by 2016 compared to the projected numbers based on the year 2010 data. Interventions shall be focused on high risk portion of the road network.

ii. 2017 – 2021: The growth phase or growth plan:
A strong focus on capacity building of the RSMS and implementation of intervention to be extended over paved roads carrying 80 percent of national traffic. The number of reported RTI fatalities and serious injuries to be reduced by 50 percent in 2021 compared to the projections based on the year 2010 data. (Target set under the UN Decade for Road Safety Action achieved).

iii. 2022 – 2026: The consolidation phase or consolidation plan.
Review and re-focusing of the RSMS to achieve set results and achieve a targeted further reduction in casualties based on the achieved results and the level of ambition generated.

6.4 The Foundation Phase: 2012 - 2016

The foundation phase aims at producing tangible results by focusing on the implementation of strategies that do not require long time to produce results such as systematic information campaigns combined with enforcement and post crash-care and rehabilitation along high risk corridors. The other area is laying a solid foundation for road safety work by legislating for an effective road safety management system including a strong lead agency with recognized legal mandate to coordinate road safety work and to secure sustainable funding. This phase should establish monitoring and evaluation framework and streamline agencies and or systems as necessary. As much preparatory work and implementation work for the other sectors should also be included as long as such actions do not interfere with the key primary goal of this phase.

6.4.1 Institutional Management Functions

Partner States recently carried out transport/road safety policy review which included elements of institutional reforms particularly the proposals to form Road Safety Authority/Agency/Board by Uganda, Tanzania and Kenya respectively. We propose that they implement the reforms to ensure that the road safety institutional management functions are carried out effectively and efficiently. The Partner States should also be prepared to carry out continuous review of the performance of their institutions to ensure that the intended results are achieved. Indicative targets are given below. Proposed outputs are listed in Table 13.

Targets:

1) An effective lead agency with basic capacity and the mandate to lead and coordinate road safety work is established
2) Sustainable and adequate source of funding for road safety activities including capacity building secured

Table 13: Foundation phase - outputs for institutional management functions

Institutional management functions	Outputs
Results focus	1. Agree on national target for the next five years
Coordination	1. A lead ministry for road safety work is appointed and an agency with a clear authority to lead and coordinate road safety work and adequate control of resources is established. 2. Clear allocation of responsibilities and targets among the sectors and the requirement to be accountable to the lead ministry through the road safety agency on road safety work is completed. 3. Preparation and implementation of a rolling action plan effected.
Secure adequate funding for road safety work	1. Sustainable fund for road safety work established – e.g. road safety fund or specific allocation from RFB. 2. Reasonable allocation for road safety work in respective ministries and road authorities achieved.
Build capacity for road safety work	1. Determine required professional positions for road safety work in the lead ministry, agency and the sectors. 2. Capacity building plan completed and implementation started.
Promote road safety work	1. Road safety seen as a core government and community business and political will secured. 2. Sufficient targeted information campaigns to achieve significant behaviour change and reduction in total fatalities carried out.
Legislation	Legislation completed: 1. Institutional reform especially formation of Road Safety Authority/Agency legalized 2. Harmonization of road safety laws 3. Legislate for the implementation of proposed strategies 4. Updating penalties for offences
Monitoring and evaluation	1. Upgrading of national road traffic crash data collection and analysis system commissioned 2. Framework for monitoring and evaluating performance of road safety work across the sectors established 3. Performance review at the end of year 2 and every year thereafter to monitor performance of each agency and sector and to identify areas that require strengthening to achieve desired results
Research, knowledge transfer/international cooperation	1. Priorities in road safety research identified and approved 2. Framework for carrying out and funding of road safety research developed and approved 3. International cooperation initiated

6.4.2 Interventions

We recommend that implementation of interventions during the foundation phase shall be limited to the critical corridors and urban areas with large share of road traffic and on which 40 to 60 percent of annual fatalities are located. This will typically comprise of 10 to 15 percent of the paved road network. Projects need to be concentrated on a limited road network to achieve immediate tangible results and learning experiences to be duplicated at regional and local levels during the growth phase. How much can be done depend on the deployable resources and existing structures for each Partner State. Critical elements of the proposed projects to achieve tangible results quickly are listed in Table 14. However, Partner States with capacity or which have achieved significant success in the listed areas should include additional projects in this phase and may set more.

Targets:

Overall National Target:

Number of annual road traffic fatalities reduced by 20 percent in year 2016 compared to what was projected based on year 2010 situation (see

Figure 12).

Targets for the selected corridors

1) Annually at least five percent of drivers stopped and tested for BAC compliance
2) Seat belt wearing rates increased to at least 80 percent
3) Standard helmet wearing rates increased to at least 90 percent for both riders and passengers
4) Proportion of drivers exceeding speed limits reduced by 60 percent
5) Awareness and support for road safety by the public increase by 50 percent
6) Hundred percent compliance of PSV to zero BAC achieved

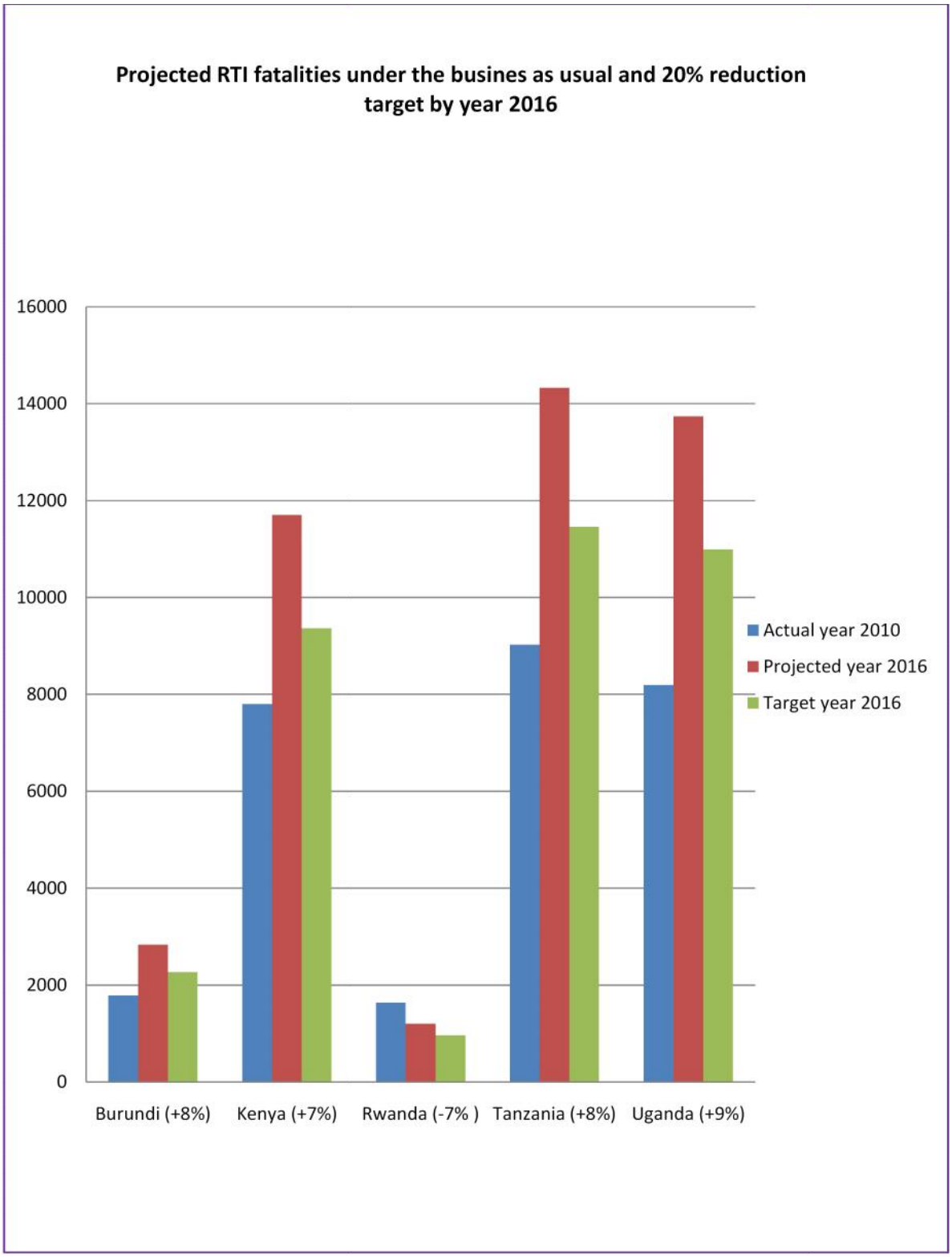


Figure 12: Projected and targeted RTI fatalities for the year 2016

Table 14: Foundation phase: Interventions and intermediate outcomes

Intervention	Output/intermediate outcome
Highest priority for tangible results	
Speed management /enforcement along selected corridors	• National speed limit set for rural roads and awareness campaign carried out • A mobile speed enforcement team (using radar) for every 50 to 100 km road section commissioned • Complete a plan for speed enforcement by camera at critical locations
BAC enforcement	• BAC law revised and awareness campaign carried out • BAC enforcement teams deployed on strategic locations
Seat belt wearing	• Seat belt law harmonized and publicized • Seat belt enforcement teams commissioned (one team for every 50 – 100 km)
Standard helmet wearing	• Law for wearing standard helmet harmonized and publicized • Enforcement teams riding motorbikes commissioned on strategic road sections
Targeted campaigns on selected themes	• Campaign themes identified and content designed • Campaigns carried out
Recovery, emergency medical services and rehabilitation	• National response system, coordination centre and pilot response units established • Publicize national universal emergency access number • Build capacity of health providers to manage RTI trauma along targeted corridors and cities
Road infrastructure	• High risk locations or sections treated • Comprehensive installation of speed limits signs and other road signs and furniture on the regional and national network • Provision of segregated paths for pedestrians and other NMT on mobility roads (i.e. along arterial roads especially in built up areas and settlements along the routes)
Intermediate priority: Preparatory work done during the phase. Implement as much as capacity allows	
Road safety education	• Review of current situation and action plan completed
Harmonize driver licensing	• Law harmonized • Driver licensing system developed and approved • Targets and action plan developed and approved • Achievable targets implemented
Harmonize vehicle licensing, inspection and certification	• Law harmonized • Vehicle inspection system developed and approved • Targets and action plan developed and approved • Achievable targets implemented
Improve land use planning and road network management	• NMT friendly urban planning project implemented • Safe system road network management projects (for cities and corridors) implemented in targeted corridors and cities

Improve public transport supply and safety	• Reviews, action plan and consultation with stakeholders completed

6.5 The Growth Phase: 2017 to 2021

The growth phase will focus on capacity building by strengthening the lead agency capacity to coordinate across the sectors, increasing sector capacities and funding for interventions and extending their coverage of the road network to include road length serving 80 percent of the national traffic volume (this is typically less than 25% of the cumulative road length). The expected level of investment in road safety activities and capacity building shall be at least five times what was invested in the foundation phase. Indicative targets are given below.

Table **15** lists the outputs of the institutional management functions and Table 16 gives the indication of outputs and intermediate outcomes for interventions.

Targets:

1) Reduce number of annual RTI fatalities by 50 percent by the year 2021 compared to those projected on the basis of the situation in 2010 (see Figure 13).
2) Build capacity and extend the targets of the foundation phase to cover road length serving 80 percent of the national road traffic.

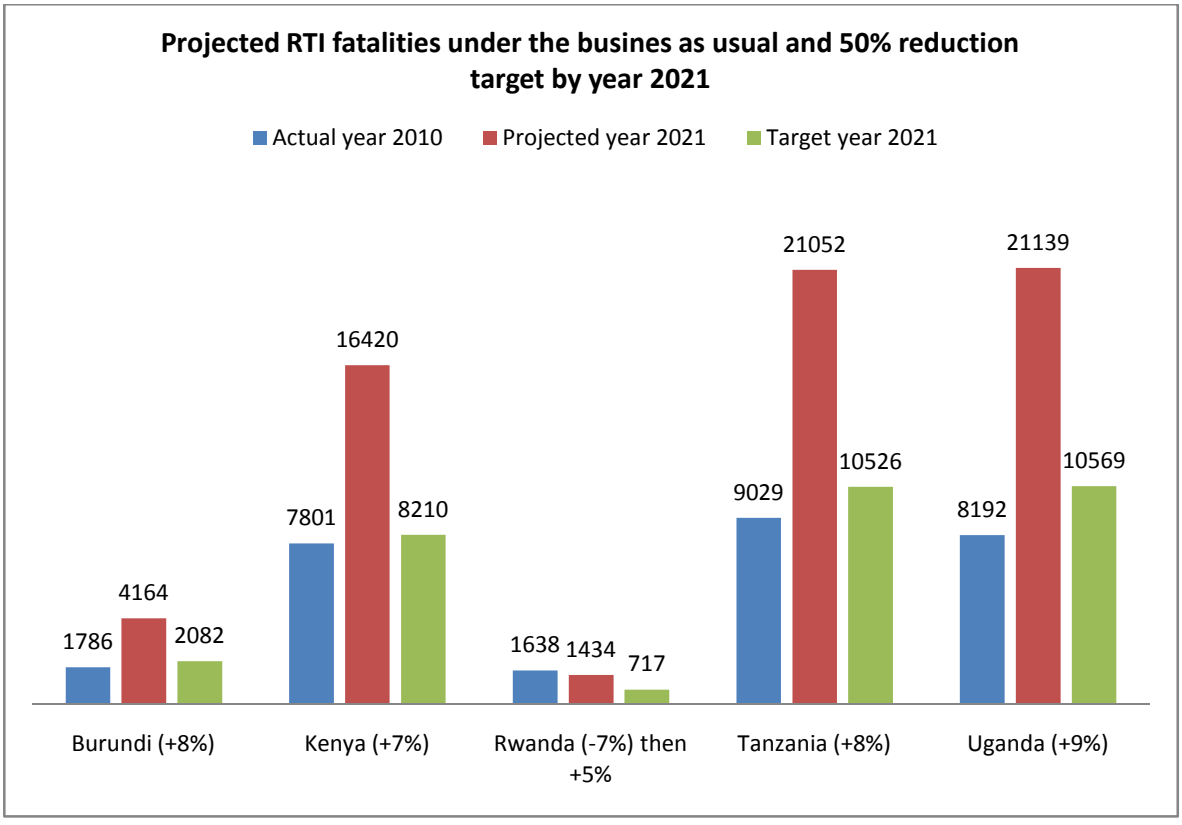


Figure 13: Projected and targeted RTI fatalities for the year 2021

Table 15: Growth phase: outputs for institutional management functions

Institutional management functions	Outputs
Results focus	1. National target for the next five years set and implemented 2. Sufficient number of professionals deployed 3. Environment for learning by doing enhanced 4. Sufficient facilities/equipment procured
Coordination	1. Lead ministry/agency strengthened (increased professional staff numbers, greater clarity of its mandate to lead, coordinate and control of resources) 2. Greater clarity in allocation of responsibilities and targets among the sectors and the requirement to be accountable to the lead ministry/agency on road safety work achieved. 3. Rolling action/investment plans set and implemented
Secure adequate funding for road safety work	1. Funding increased to required levels – at least five times the allocation for the foundation phase 2. Sufficient allocation for road safety work in respective ministries and road authorities achieved
Promote road safety work	1. Increased political will for road safety achieved 2. Targeted road safety campaigns on all media covering identified themes
Legislation	1. Further review and adaptation of legislation completed
Monitoring and evaluation	1. National road traffic crash data collection and analysis system extended to cover the entire network 2. Results of national crash data analysis disseminated 3. Monitoring and evaluation performance of road safety work across the sectors extended over the entire network. 4. Performance review at the end of each year to identify areas that require further strengthening to achieve desired results completed
Research, knowledge transfer/international cooperation	1. New priorities in road safety research established 2. Adequate funding for research disbursed 3. International cooperation/benchmarking strengthened

Table 16: Growth phase - outputs and intermediate outcomes for interventions

Intervention	Output/intermediate outcome
Speed management /enforcement along selected corridors	• National speed limits and local speed limits enforced across the selected network • A mobile speed enforcement team (using radar) for every 50 to 100 km road section commissioned for the selected network • The plan for speed enforcement by camera at critical locations implemented
BAC enforcement	• BAC information campaign and enforcement continued • BAC enforcement teams deployed across the prioritized network
Seat belt wearing	• Seat belt law public campaign continued • Seat belt enforcement teams (one team for every 50 – 100 km) over the prioritized network commissioned
Standard helmet wearing	• Wearing standard protective helmet public campaign continued • Enforcement teams riding motorbikes commissioned on extended strategic road sections
Targeted campaigns on selected themes	• Campaign themes identified and content designed • Campaigns carried out nationally
Recovery, emergency medical services and rehabilitation	• Emergency response units established across the nation • National universal emergency access number publicized • Build capacity of health providers to handle RTI trauma along all major transport corridors and major towns strengthened/established
Road safety education	• Road safety education project fully implemented
Harmonize driver licensing	• Driver licensing project fully implemented
Harmonize vehicle licensing, inspection and certification	• Vehicle inspection, licensing and certification project fully implemented
Improve land use planning and road network management	• NMT friendly urban planning project implementation reviewed • Safe system road network management projects (for cities and corridors) project implemented on the extended targeted corridors, municipalities and towns
Improve public transport supply and safety	• Increased supply of improved and safer public transport services

6.6 The Consolidation Phase: 2022 – 2026

The consolidation phase strengthens the achievements of the previous phases and adjusts the lead agency, level of funding and the re-structuring of the institutions to achieve further focus on the results, efficiency and effectiveness based on the research and experience gained from the decade of road safety action. Interventions on the national road network shall be sustained and extended to cover the entire network. This will require the involvement of all road authorities – at national and local levels.

Targets:

The national target for this phase shall be set by the lead agency in collaboration with the mandated implementing institutions on the basis of the achievements of the growth phase and the political will and level of ambition generated.

1) *Whatever target is set it should aim at reversing the trend of RTI fatalities so that the total number of RTI fatalities is lower than the previous year, regardless of the growth in traffic volume, for each succeeding year as shown in Figure 14.*
2) National target shall be devolved to regional and local levels.

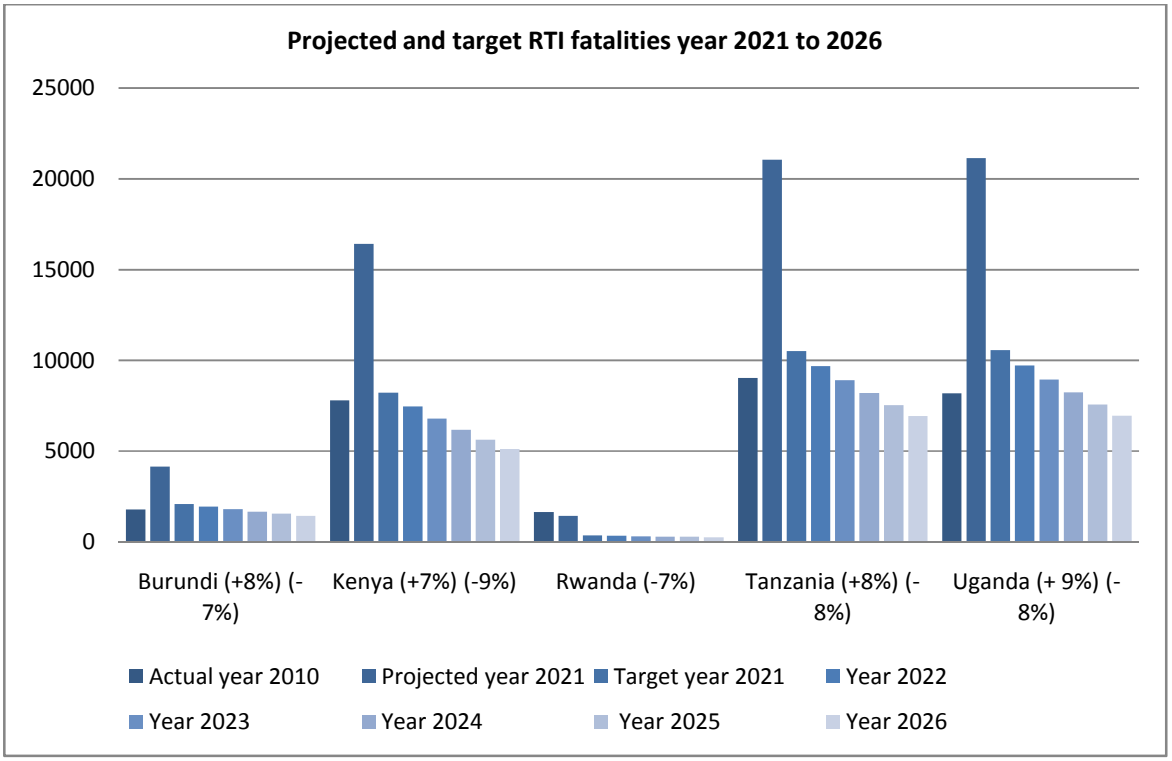


Figure 14: Possible scenario for the consolidation phase year 2022 to 2026

Institutional management functions:

1) Review and re-structure the lead agency if necessary
2) Increase the lead agency's capacity to meet renewed ambition and targets
3) Review and strengthen institutional capacity
4) Extend monitoring and evaluation to cover the entire network
5) Review the national crash database and increase performance and usefulness of output for national and local campaigns and evaluation of performance.
6) Publicize research and performance findings and review research priorities

Interventions

1) Review and internationally benchmark safety policies and interventions
2) The implementation of the projects shall be extended to cover the entire network.

6.7 The Lead Agency: National Road Safety Agency/Authority

The importance of appointing and establishing a lead agency with legal mandate to lead and coordinate road safety work cannot be overemphasized. The agency should have a sustainable funding source to enable it to carry out the seven management functions and control resource allocation to the agencies which are assigned activities contributing to the achievement of the set targets. The management functions to be carried out directly by the Road Safety Authority may vary but it should be noted that in addition to leadership, coordination, resource allocation and promotion, as many of the remaining functions as considered practicable should be done under the same roof to ease the coordination task. Monitoring and evaluation should identify what is working or not working and identify practices that are most readily implementable in the respective Partner State.

The lead agency shall not only coordinate the activities of government agencies but also those of private sector (businesses) and civic organizations. The lead agency must see to it that it tapes into the potential contributions from businesses and civic organizations for pushing forward the cause of road safety. The Global Road Safety Partnership (GRSP) promotes government collaboration with businesses and civic organizations as such partnerships have proven their worthy in accelerating road safety as well as in other development issues (please see *www.**grsp**roadsafety.org*). A good example in the region is the Arrive Alive Campaign in Uganda (AAU). The campaign is funded by businesses and managed by a NGO (please see www.**arrivealive**.or.ug).

6.8 Sustainable Funding, Resource Allocation and Proposed Budget

Sustainable funding

The roads fund is one sustainable source of funds for road safety work. Each government should work out how best to secure sustainable funding for road safety work so that the plan is implemented to achieve the targets on schedule. A combination of user charges to finance the interventions and allocations from tax revenue to pay salaries and other fixed costs should be considered. Potential sources include:

- Government budget including funds from Development Partners – to cover road safety actions under government departments and agencies. This is critical during the first two years when the other sources are being mobilized

- Contribution from road users through one or more of the following:
  i. Fuel levy to be collected through the road fund system
  ii. A proportion of driver licence fees
  iii. Vehicle registration fees
  iv. A proportion of fines for traffic law violations
  v. A proportion of vehicle inspection fees
  vi. A proportion of motor vehicle insurance premiums
  vii. Road safety levy on all motor vehicles to be paid whenever the road licence is renewed

- Direct contributions from businesses especially the oil companies

Each Partner State should adopt the most appropriate source to fund its plan. Funds may also be mobilized by the EAC for road safety component for the regional network.

Public private partnerships should be fully embraced. Companies can be engaged under PPP to install and maintain cameras to enforce speed and red-light running violations at their cost and get paid by getting a share of the revenue generated from the fines. Funding from businesses like oil and insurance companies should be fully used in activities like awareness campaigns. NGO's should be engaged in their areas of competencies notably in campaigning for higher priority for road safety among PSV companies, central and local governments as well as in business.

Resource allocation

The allocation of funds from the Road Safety Fund is one of the management functions to be carried out by the Road Safety Authority. There should be a transparent procedure for resource allocation and a mechanism to ensure that funds are allocated according to established priorities and that the funds allocated are used for the intended interventions. When establishing procedures experience gained in the management of road fund boards in the region should be reviewed and adopted as appropriate.

Proposed budget

Each Partner State should decide on a viable budget for the implementation of its own strategy. We have recommended an indicative budget which each Partner State should strive to exceed as capacity for road safety work is developed. It is reasonable to spend up to about ten percent of the annual loss due to road traffic crashes. This translates to about 0.30 percent of the GDP or more than 250 million US Dollars in 2012. We propose a slightly lower amount for the first five years to allow capacity to do road safety work to develop as the professionals in the Partner States learn by doing and to allow for the fact that recurrent expenditure including salaries, office space etc are not included in the intervention budget. As the capacity for road safety work increases the budget should be increased to the amount necessary for implementing the interventions and effectively achieve the set targets. So we propose at least 810 million US Dollars for the first five years be secured for implementing the interventions apart from costs for paying salaries for government staff

and meeting the operating expenses of the government agencies which should come from governments general revenue. The budget proposed for each of the Partner States is approximately proportional to the number of fatalities due to RTCs to be prevented during the year 2022 and is shown in

Table **17** and is distributed over the five years as shown in Table 18.

Figure 15 presents a projection of road crash costs under the scenario of business as usual where fatalities and therefore crash costs are forecasted to grow at 8 percent and strategy implementation resulting in 20 percent reduction in crash costs. The budget and benefits are also shown. The benefit cost (B/C) ratio for the first five years is just over 2 and set to increase during the growth phase.

Table 18 The proposed allocation to the different strategies and actions outlined in Chapter Four for each Partner State is given in the appendices.

Table 17: Budget for the First Five Years

Partner State	Burundi	Kenya	Rwanda	Tanzania - Mainland	Tanzania - Zanzibar	Uganda	EAC Secretariat	Total
Budget in million US Dollars	60	205	50	250	10	230	5	810
Fatalities to be prevented in the year 2022	1,700	7,000	1,500	8,700	250	8,000	NA	27,150

Figure 15 presents a projection of road crash costs under the scenario of business as usual where fatalities and therefore crash costs are forecasted to grow at 8 percent and strategy implementation resulting in 20 percent reduction in crash costs. The budget and benefits are also shown. The benefit cost (B/C) ratio for the first five years is just over 2 and set to increase during the growth phase.

Table 18: Proposed distribution of the budget in USD for the foundation phase

Partner State	Year 1	Year 2	Year 3	Year 4	Year 5	Total
EAC Secretariat	500,000	1,500,000	500,000	2,000,000	500,000	5,000,000
Burundi	8,679,245	14,339,623	12,377,358	12,159,030	12,444,744	60,000,000
Kenya	29,582,325	48,875,146	42,186,968	41,488,751	42,866,810	205,000,000
Rwanda	7,229,457	11,944,320	10,309,834	10,139,201	10,377,189	50,000,000
Tanzania - Mainland	36,076,006	59,603,836	51,447,522	50,596,038	52,276,598	250,000,000
Tanzania - Zanzibar	1,443,040	2,384,153	2,057,901	2,023,842	2,091,064	10,000,000
Uganda	33,189,926	54,835,529	47,331,720	46,548,355	48,094,470	230,000,000
Total	116,699,999	193,482,607	166,211,303	164,955,217	168,650,874	810,000,000

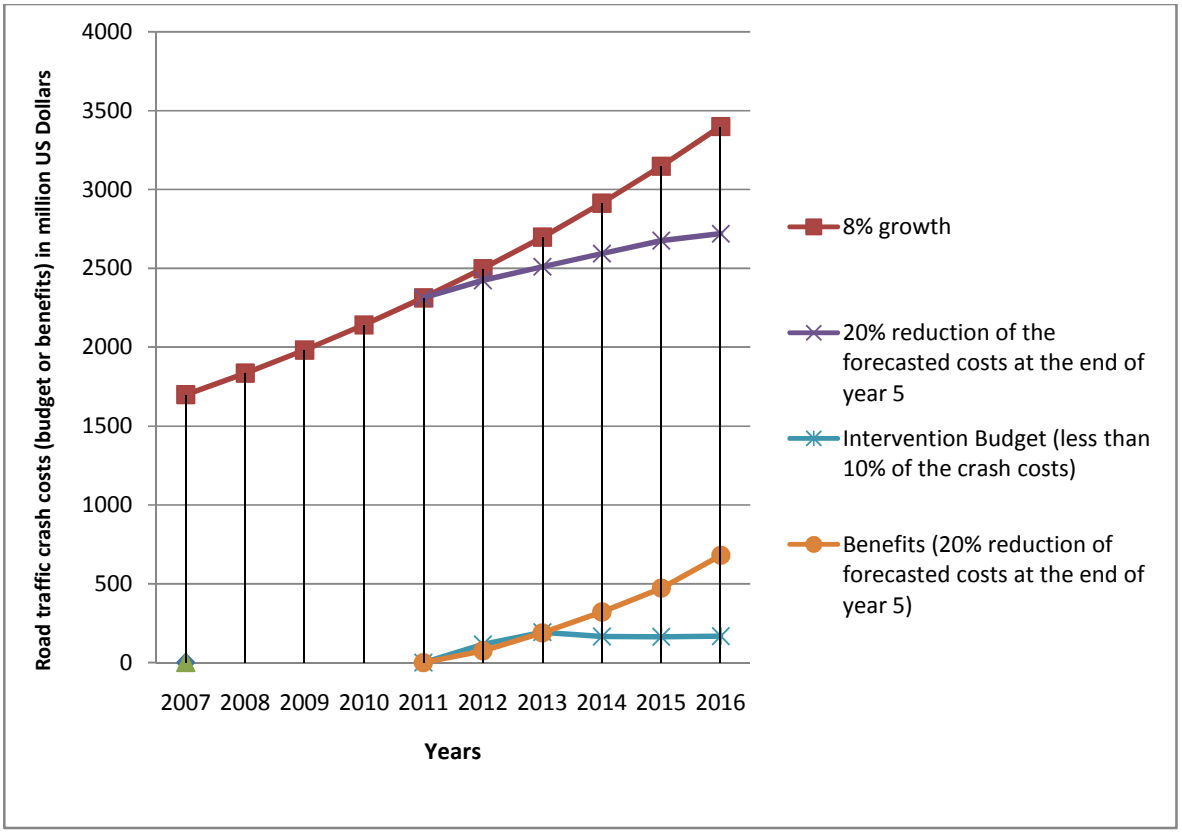


Figure 15: A visualization of crash costs, budget and benefits for the foundation phase

6.9 The Role of EAC Secretariat

Once the framework for the development of road safety master plan is agreed upon, the EAC Secretariat needs to carry out the following actions to stimulate and keep on course the implementation across the Partner States:

1) Organize bi-annual forum (workshop/conference) where:
   - Lead agencies (National Road Authority/Agency) present country reports on road safety status and progress
   - In-country research work papers are presented and discussed
   - International experts or organizations are invited to present papers relevant to the road safety needs in EAC
   - Supporting technical assistance in resolving issues considered to be common to the Partner States
2) Facilitate independent inspection / audit of road safety work in Partner States and thus provide them with an independent feedback of their progress and suggest priorities at each stage of the evolution of road safety work.

A budget to cover these actions for the first five years is indicated in Table **17**.

Annex 3 includes a number of checklists that we are recommending for use by the Secretariat and the Partner States for the purpose of monitoring and evaluating progress toward the development of an effective road safety management system. The instrument consists of parts covering both interventions and the institutional management functions listed below:

Part 1: Results focus at the system level

Part 2: Planning, design, operation and use of the road network

Part 3: Entry and exit of vehicles to and from the road network

Part 4: Entry and exit of road users to and from the road network

Part 5: Recovery and rehabilitation of crash victims from the road network

Part 6: Coordination

Part 7: Legislation

Part 8: Funding and resource allocation

Part 9: Promotion

Part 10: Monitoring and Evaluation

Part 11: Research, Development and Knowledge transfer

Part 12: Lead Agency role and institutional management functions

Each part has questions addressing the issues for the particular component and requires a response of yes, partial, pending or no. The responses indicate the status of road safety activities in that particular component and help to prompt the Lead Agency or other units to appreciate where they need to reassess priorities and action.

References

African Regional Capacity Building Network for HIV and AIDS Prevention, Care and Treatment Project Report, 2010

Andrews CN, Kobusingye OC and Lett R, (1999). Road traffic accident injuries in Kampala, East Africa Med Journal Apr 76(4): 189-94

Batalia CJ (2001). Enforcement of Laws and Regulations that Govern the Road Transport Industry in East Africa, Report submitted to USAID/REDSO/ESA Nairobi Kenya. Visited on 27th May at: http://pdf.usaid.gov/pdf_docs/PNACM825.pdf

Bliss and Breen (2008). Implementing the recommendations of The World Report on Road traffic Injury Prevention: Country guidelines for the conduct of road safety management capacity reviews and the related specification of lead agency reforms, investment strategies and safety programs and projects, The World Bank.

EAC HIV and AIDS Workplace policy – 2008

EAC Regional Integrated Multi-sectoral HIV and AIDS Strategic Plan 2007 -2012

ESCAP (Economic and Social Commission for Asia and the Pacific) (2009). Major issues in transport: transport and the society – Improving road safety in Asia and the Pacific. UNESC Forum of Asian Ministers of Transport 14-16 December 2009 Bangkok

Global Plan - **Decade** of **Action** for **Road Safety** 2011-2020
www.**decade**of**action**.org/documents/global_plan_en.pdf

GoK (2009). National Road Safety Action Plan – 2009 – 2014.

Kenya Workplace Policy on HIV/ AIDS for the Transport Sector, 2003

Kenya National AIDS Strategic Plan 2009/10 – 2012/13

Kenya National Guidelines for HIV Testing and Counselling 2008

Long Distance Truck Driver's Perception and Behaviour towards STI/HIV/TB and Existing Health Services in Selected Truck Stops of the Great Lakes region: A Situation Assessment – 2006

Macharia WM, Njeru EK, Muli-Musiime F and Nantulya V, (2009). Severe road traffic injuries in Kenya, quality of care and access, *African Health Sciences, Vol. 9(2),* Visited on 2nd June at:

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2707053/

Ministry of Infrastructure (2008). Transport Sector Policy, Rwanda

MoW, (2004). National Road Safety Master Plan for Tanzania Mainland and Zanzibar

Odero, W, M, Khayesi and P M Heda (2003). Road traffic injuries in Kenya: magnitude, causes and status of intervention. Injury Control and Safety Promotion Vol. 10, No. 1-2, pp. 53-61

OECD / ITF, (2008). Towards Zero: Ambitious Road Safety Targets and the Safe System Approach

Nyoni J and Masaoe E (2011). Factors contributing to high frequency of vulnerable road user injury in Dar es Salaam. Paper Presented to the 30th SATC Pretoria 11th to 14th July 2011

Peden et al, (2004). World Report on Prevention of Road Traffic Injury, WHO, Geneva

PIARC (2003). Road Safety Manual, R2ute market

SafetyNet (2009). Road Safety Management

SUMATRA (2007). A Study on Road Traffic Accidents in Mainland Tanzania, *Submitted by BICO*

Tanzania national Multi-Sectoral Strategic framework on HIV/AIDS 2003-2007

Tanzania National Guidelines for Voluntary Counselling and Testing, 2005

Tanzania Policy on HIV/AIDS, 2001

Tanzania HIV and AIDS Prevention and Control Act, 2008

Tanzania Second National Multi-Sectoral Strategic Framework on HIV and AIDS 2008-2012

Tanzania National HIV and AIDS Communication and Advocacy Strategy

Twagirayezu R, Teteli R, Bonane A, Rugwizangoga E. (2008) Road traffic injuries at Kigali University Teaching Hospital, Rwanda. East and Central Africa Journal of Surgery, http://www.bioline.org.br/js

Uganda National HIV and AIDS Strategic Plan 2007/8- 2011/12

Uganda National Policy Guidelines for HIV Counselling and Testing, 2005

URT, (2009). National Road Safety Policy, MOID, Dar es Salaam, Tanzania

WHO (2009). Status Report on Road Safety in Countries of the WHO African Region 2009, WHO, Brazzaville.

World Life Expectancy (www.worldlifeexpectancy.com) visited: July 29th 2011

APPENDIX 1: ACTIVITY AND COSTING MATRIX FOR THE HIV/AIDS ROAD TRANSPORT CORRIDOR STRATEGY

Strategy Area	Objective	Planned Activities	Indicators	Timeframe	Responsible Actors	Estimated Costs US $
Strategy 1: Ensuring accessibility of HIV/AIDS related services	1. Increase access to prevention, treatment, care and support of TB/STI/HIV/AIDS services.	1 Increase the number of facilities offering TB/STI/HIV/AIDS services along the transport corridors	1. Number of service facilities offering TB/STI/HIV/AIDS services along the transport corridor	50% by 2017 100% by 2022	1. Ministry of Health in the respective countries 2. NGOs working on HIV/AIDS along the transport corridor 3. Local district/ province councils 4. National AIDS Control Programs/ Councils in the respective countries	US $ 40,000.00 per facility per year
	2. To develop criteria for the allocation of health services along the transport corridor	2. Ensure that facilities are located as all cross boarder sites, weighbridges, custom points, off loading spots and all major hot spots	2. Number of important sites along the corridor with established HIV/AIDS services	50% by 2017 100% by 2022		US $ 30,000.00
	3. To define health service packages to be offered along the transport corridor	3. Ensure that service facilities provide TB/STI/HIV/AIDS service 24 hours per day 4. Establish Wellness Centres along the transport corridor	3. Number of service facilities offering TB/STI/HIV/AIDS services 24 hours per day 4. Number of Wellness Centres established along the transport corridor	100% by 2013 50% by 2017 100% by 2022		US $ 30,000.00 US $ 40,000.00 per facility per year
	4. To develop standard operating procedures to guide the provision of health services along the transport corridor	5. Develop Standard Operating procedures for HIV/AIDS service provision along the transport corridors	Standard Operating Procedures developed	By end of 2012		US $ 30,000.00

Strategy 2: Provision of comprehensive TB/STI/HIV/AIDS services	1. To provide comprehensive TB/STI/HIV/AIDS services	1. Ensure that health facilities including "Wellness Centres" provide comprehensive and integrated TB/STI/HIV/AIDS services.	1. Number of health facilities and Wellness centres that provide comprehensive and integrated TB/STI/HIV/AIDS services	50% by 2015 100% by 2018	1. Ministry of Health in the respective countries 2. NGOs working on HIV/AIDS along the transport corridor National AIDS Control Programs/ Councils in the respective countries	US $ 40,000.00 per facility per year
	2. To develop an essential minimum package for HIV and AIDS related services	2. Ensure that STI screening and treatment is included in the HIV/AIDS package and is provided free of charge	1. Inclusion of STI treatment in the HIV/AIDS package 2. Number of heath facilities offering free STI treatment	By the end of 2012 100% by 2015		US $ 40,000.00 per facility per year
		3. Integrate TB services in HIV/AIDS service centres	1. Number of health facilities integrating TB services in their HIV/AIDS treatment package	100% by 2015		US $ 40,000.00 per facility per year
		4. Develop a minimum package for HIV and AIDS related services to be provided in all health facilities along the corridor.	1. HIV and AIDS package for service facilities developed	By the end of 2012		US $ 30,000.00
Strategy 3: Mainstreaming HIV/AIDS interventions into district plans	1. To ensure that HIV/AIDS interventions along the transport corridor including the Wellness Centres are integrated into local development plans	1. Advocate for the integration of HIV/AIDS interventions along the transport corridor into local development plans	1. Number of Wellness centres integrated into local development plans	50% by 2017 100% by 2022	1. Ministry of Health in the respective countries 2. NGOs working on HIV/AIDS along the transport corridor 3. Local district/	US $ 30,000.00

	2. Ensure that HIV/AIDS interventions along the transport corridor including the Wellness Centres are linked up with the National Health Systems at the local levels.	2. Link up of HIV/AIDS interventions along the transport corridor with the Health system at the local levels	2. Number of HIV/AIDS interventions linked up with the local levels health systems	50% by 2017 100% by 2022	province councils	US $ 30,000.00
Strategy 4: Harmonization of key HIV/AIDS care and treatment policies and protocols	1. To harmonize all key HIV/AIDS health related protocols	1. Harmonization of STI treatment protocol 2. Harmonization of HIV/Hepatitis B virus and Hepatitis C virus Co-infection treatment protocol 3. Harmonization of Palliative/ Home based care protocol 4. Harmonization of the treatment of Opportunistic infections other then TB	1. Harmonized STI treatment protocol 2. Harmonized HIV/Hepatitis B virus and Hepatitis C virus Co-infection treatment protocols 3. Harmonized Palliative/ Home based care protocol 4. Harmonized treatment protocols for Opportunistic infections other than TB	By the end of 2012 By the end of 2012 By the end of 2012 By the end of 2012	1. Ministry of Health in the respective countries	US $ 85,000.00
Strategy 5: Develop a Regional HIV/AIDS Communication Strategy	1. To develop a joint communication framework among Partner States	1. Carry out a behaviour assessment survey along the transport corridor to establish appropriate communication messages 2. Develop communication messages and materials	1. Behaviour assessment along transport corridors carried out 2. Communication messages and materials developed	By the end of 2012 By the end of 2013	1. National AIDS Control Programs/ Councils in the Partner States 2. NGOs working on HIV/AIDS along the transport corridor	US $ 125,000.00
Strategy 6:	1. Ensure that all	1. Develop HIV/AIDS	1. HIV/AIDS policy	By the end of		US $ 55,000.00

Integration of HIV/AIDS in the transport corridor	Partner States have a HIV/AIDS policy for the transport sector 2. Ensure that HIV/AIDS prevention interventions are adequately integrated into the transport sector	policy for the transport sector in the respective countries 2. Integrate HIV/AIDS prevention activities in construction bidding documents	for the transport sector developed 2. Construction bidding documents allocating funds for HIV/AIDS interventions	2013 By the end of 2012	1. Ministry of Transport in the respective Partner States	
Strategy 7: Economic empowerment and HIV vulnerability reduction along the transport corridor	1. Improve the economic situation of local communities along the transport corridor 2. Integrate economic empowerment models into the HIV/AIDS prevention agenda	1. Mobilize economic empowerment models into HIV/AIDS agenda 2. Ensure that HIV/AIDS interventions along the transport corridor address the economic vulnerability of local communities along the transport corridors	1. Number of HIV/AIDS intervention that have modelled economic empowerment	By the end of 2013	1. NGOs working on HIV/AIDS along the transport corridor 2. Local district/ province councils	US $ 400,000.00 per year
Strategy 8: Commitment across Partner Stated to implement the strategy	1. To develop a coordination mechanism to adequately oversee the implementation of HIV/AIDS activities in the transport corridor	1. Appoint a HIV/AIDS focal person in the respective countries to be housed in the Ministry of Transport 2. Developing a reporting system in the respective countries that will be linked to the Health Directorate at EAC	1. The number of Ministries of Transport with a HIV/AIDS focal person 2. A reporting system in place	By the end of 2012 By the end of 2012	1. Ministry of Transport in the respective Partner States	US $ 30,000.00
Strategy 9: Securing commitment to the	1. To sensitize and create awareness of	1. Undertake sensitization seminars	1. The number of sensitization	50% by 2012 100% by 2013		

implementation of the strategy	the strategy among implementing partners and stakeholders 2. To advocate for the integration of HIV/AIDS activities along the transport corridor in the national HIV/AIDS strategic plans	among key implementing partners and stakeholders 2. Ensure that HIV/AIDS activities/ services along the transport corridor are adequately addressed in National HIV/AIDS strategic Plans	seminars carried out 2. Number of HIV/AIDS activities in the transport corridor addressed in the National HIV/AIDS strategic Plans	 50% by 2012 100% by 2013	1. Ministry of Transport in the respective Partner States	US $ 300,000.00
Strategy 10: Monitoring and Evaluation	1. To have in place a monitoring and evaluation system that would collect information on HIV interventions carried along the transport corridor	1. To utilize GLIA M & E framework to capture progress made along the corridor in addressing the epidemic 2. To allocate adequate resources to the M & E units to facilitate undertaking of assigned activities 3. Put in place an M&E unit within the Ministry of Transports in the respective countries	1. Operationalization of GLIA M&E framework 2. Have in place well functioning M&E systems	By the end of 2012 By the end of 2012	1. Ministry of Transport in the respective Partner States	US $ 300,000.00

	2. To undertake a bio-behavioural surveillance to identify baseline HIV prevalence and behaviour 3. To link up Wellness Centres and other health facilities along the transport corridors to the HIV/AIDS national surveillance systems in the respective countries	4. Carry out bio-behavioural surveillances as baseline and thereafter after every 3 years 5. Link up the Wellness centres and health facilities operating along the corridor to the HIV/AIDS national surveillance systems in the respective countries	3. Number of behavioural surveillances carried out 4. Number of Wellness Centres and health facilities linked to the national surveillance systems	First to be carried out by the end of 2012 50% by 2017 100% by 2022	National AIDS control Programs/Councils in the respective Partner States	US $ 600,000.00 per every surveillance round
Strategy 11: Resource Mobilization	1. To mobilize resources for undertaking the harmonization of HIV/AIDS interventions across Partner States	1. Integrate HIV/AIDS intervention along the transport corridors into National HIV/AIDS Strategic Plans 2. Undertake national resource mobilization for HIV/AIDS activities along the transport corridor 3. Undertake regional initiatives to mobilize resources from Global Fund, PEPFAR, World Bank, and bilateral and multilateral development partners.	1. Number of HIV/AIDS activities in the transport corridor addressed in the National HIV/AIDS strategic Plans 2. Number of resource mobilization carried out 3. Number of regional resource mobilization initiatives undertake	50% by 2012 100% by 2013 2012 ongoing 2012 ongoing	Ministry of Transport in the respective countries National AIDS control Programs/Councils in the respective Partner States	US $ 40,000.00
Strategy 12: Fostering public private partnership	1. To advocate for public-private partnership in addressing the HIV/AIDS epidemic	1.Mobilize the involvement of the private sector in undertaking HIV/AIDS interventions along the	1. The number of private sector actors involved in HIV/AIDS interventions along the transport corridor	2012 ongoing	Ministry of Transport in the respective countries	US $ 50,000.00

	along the transport corridor	transport corridors 2. Develop a network of actors from the private sector (NGO local and international and donor agencies) to share technical skills and experiences from working in the corridor 3. Build up partnership with the private sector clinics and pharmacies to provide comprehensive access to HIV/AIDS related health services	2. A network of actors working on HIV/AIDS along the transport corridors formed 3. Number of private sector clinics and pharmacies linked up to the network of actors working along the transport corridors	By the end of 2013 2013 ongoing	National AIDS control Programs/Councils in the respective Partner States Ministry of Health in the respective Partner States	US $ 50,000.00 US $ 50,000.00
Strategy 13: Capacity building	1. To build the capacity of the Partner States and other stakeholders at local and national level to adequately integrate HIV/AIDS into the transport sector 2. To build the capacity of the Partner States and other stakeholders at local and national level to adequately respond to harmonization proposals across all Partner States	1. Train partners and stakeholders working along the transport corridor to adequately understand the interrelationship between HIV/AIDS and the transport sector 2. Train partners and stakeholders to adequately respond to the proposals of harmonization of the strategy	1. The number of trainings carried out 2. The number of trainings carried out	By the end of 2012 By the end of 2012	National AIDS control Programs/Councils in the respective Partner States Ministry of Health in the respective Partner States Ministry of Transport in the respective countries	US $ 120.000.00 US $ 120,000.00

	3. To build the capacity of units within the respective Ministries of Transport to adequately operationalize sectoral HIV/AIDS strategic plans	3. Train staff from the Ministry of Transport responsible for the operationalization of sectoral HIV/AIDS strategic plans.	3. Number of staff from the Ministry of transport trained	3. By the end of 2012	National AIDS control Programs/Councils in the respective Partner States Ministry of Health in the respective Partner States	US $ 25,000.00

APPENDIX 2: PROPOSED BUDGET FOR THE ROAD SAFETY STRATEGIES

	Partner State:		**BURUNDI**				
	Total five year budget in US $		**60,000,000**				
Sn	**Action**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
S1	**Systematic information campaigns and enforcement**						**22,395,000**
1.1	Promote road safety as a core government business	300,000	150,000	90,000	45,000	30,000	615,000
1.2	Amend road safety laws	180,000	60,000				240,000
1.3	Enforcement of safety laws (training and operations)	1,200,000	1,440,000	1,560,000	1,680,000	2,040,000	7,920,000
1.4	Procure enforcement equipment (motorbikes, breath-analyzers, speed radars etc.)	600,000	1,080,000	1,320,000	1,200,000	960,000	5,160,000
1.5	Targetted information campaigns	900,000	1,620,000	1,980,000	1,800,000	1,440,000	7,740,000
1.6	Implement ICT based enforcement (speed cameras etc) through PPP	480,000	240,000	-	-	-	720,000
S2	**Institutional reform, capacity building and sustainable funding**						**10,380,000**
2.1	Reform the RSMS including establishment of NRSA and related agencies						
2.2	Establish road safety fund (RSF)	480,000	960,000	1,440,000	1,920,000	2,160,000	6,960,000
2.3	Capacity building including training, learning by doing, technical assistance	180,000	360,000	720,000	360,000	540,000	2,160,000
2.4	Develop, publish and promote a five year National Road Safety Strategy based on the framework for the development of an EARSM. Evaluate, develop and publish new strategy during year 5	420,000	210,000	-	-	630,000	1,260,000
S3	**Improve road safety data management**						**2,100,000**
3.1	All actions identified under the strategy	300,000	600,000	600,000	300,000	300,000	2,100,000

							-
S4	**Improve road safety research**						**2,340,000**
4.1	All actions identified for the strategy other than contracted research	240,000	120,000	120,000	120,000	120,000	720,000
4.2	Contracted research including capacity building component for research institutes	180,000	540,000	450,000	180,000	270,000	1,620,000
							-
S5	**Driver and vehicle examination and licensing**						**5,220,000**
5.1	Vehicle inspection and licensing project	1,200,000	2,400,000	-	-	-	3,600,000
5.2	Driver testing and licensing project	540,000	1,080,000	-	-	-	1,620,000
S6	**Road safety education (RSE) in schools**						**876,000**
6.1	RSE status review	120,000					120,000
6.2	Develop and publish RSE curriculum for Primary and Secondary schools and for Teachers Colleges	-	360,000	156,000	-	-	516,000
6.3	Implement new RSE curriculum, monitor, evaluate and report to the NRSA				120,000	120,000	240,000
S7	**Improve public transport supply and safety**						**1,944,000**
7.1	Information campaigns focused on PSV operators, drivers and users	540,000	540,000	324,000	270,000	270,000	1,944,000
7.2	All other actions - covered under Strategy 1	0	0	0	0	0	-
S8	**Improve Land use planning and road network management**						**11,760,000**
8.1	Development of NMT friendly urban planning guidelines	420,000	1,260,000	-	-	-	1,680,000

8.2	Monitoring and evaluation of NMT friendly land use guidelines and reporting to the NRSA	-	-	-	-	180,000	180,000
8.3	Actions to improve safety of road networks (to be funded directly under the RFB)	600,000	1,200,000	2,700,000	2,700,000	2,700,000	9,900,000
8.4	Monitoring and evaluation by the NRSA of actions under National Roads Agency and Local government	-	-	60,000	60,000	60,000	180,000
S9	**Improve pre-hospital and hospital trauma management services**						**7,815,000**
9.1	Establish/strengthen National response system and response units at district level	60,000	600,000	600,000	1,200,000	600,000	3,060,000
9.2	Publicize national emergency number and how to access response services	0	30,000	60,000	30,000	15,000.0	135,000
9.3	Build capacity of health centres receiving RTI victims	420,000	600,000	1,200,000	1,200,000	1,200,000	4,620,000
S10	**Improve safety of motorcycle riders and their passengers**						**1,770,000**
10	Reform and strengthen the training and testing of motorcyclists	120,000	240,000	180,000	132,000		672,000
10	Information campaigns targetting (a) motorcyclists and (b) motor vehicle drivers	180,000	270,000	216,000	216,000	216,000	1,098,000
	Total allocated expenditure						**59,505,000**
	Balance to be allocated						**495,000**

	Partner State:	**KENYA**					
	Total five year budget in US $		**205,000,000**				
Sn	**Action**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
S1	**Systematic information campaigns and enforcement**						**76,567,500**
1.1	Promote road safety as a core government business	1,025,000	512,500	307,500	205,000	102,500	2,152,500
1.2	Amend road safety laws	615,000	205,000				820,000
1.3	Enforcement of safety laws (training and operations)	4,100,000	4,920,000	5,330,000	5,740,000	6,970,000	27,060,000
1.4	Procure enforcement equipment (motorbikes, breath-analyzers, speed radars etc.)	2,050,000	3,690,000	4,510,000	4,100,000	3,280,000	17,630,000
1.5	Targetted information campaigns	3,075,000	5,535,000	6,765,000	6,150,000	4,920,000	26,445,000
1.6	Implement ICT based enforcement (speed cameras etc) through PPP	1,640,000	820,000	-	-	-	2,460,000
S2	**Institutional reform, capacity building and sustainable funding**						**35,465,000**
2.1	Reform the RSMS including establishment of NRSA and related agencies						
2.2	Establish road safety fund (RSF)	1,640,000	3,280,000	4,920,000	6,560,000	7,380,000	23,780,000
2.3	Capacity building including training, learning by doing, technical assistance	615,000	1,230,000	2,460,000	1,230,000	1,845,000	7,380,000
2.4	Develop, publish and promote a five year National Road Safety Strategy based on the framework for the development of an EARSM. Evaluate, develop and publish new strategy during year 5	1,435,000	717,500	-	-	2,152,500	4,305,000
S3	**Improve road safety data management**						**7,175,000**
3.1	All actions identified under the strategy	1,025,000	2,050,000	2,050,000	1,025,000	1,025,000	7,175,000
S4	**Improve road safety research**						**7,995,000**

4.1	All actions identified for the strategy other than contracted research	820,000	410,000	410,000	410,000	410,000	2,460,000
4.2	Contracted research including capacity building component for research institutes	615,000	1,845,000	1,537,500	615,000	922,500	5,535,000
S5	**Driver and vehicle examination and licensing**						**17,835,000**
5.1	Vehicle inspection and licensing project	4,100,000	8,200,000	-	-	-	12,300,000
5.2	Driver testing and licensing project	1,845,000	3,690,000	-	-	-	5,535,000
S6	**Road safety education (RSE) in schools**						**2,993,000**
6.1	RSE status review	410,000					410,000
6.2	Develop and publish RSE curriculum for Primary and Secondary schools and for Teachers Colleges	-	1,230,000	533,000	-	-	1,763,000
6.3	Implement new RSE curriculum, monitor, evaluate and report to the NRSA				410,000	410,000	820,000
S7	**Improve public transport supply and safety**						**6,642,000**
7.1	Information campaigns focused on PSV operators, drivers and users	1,845,000	1,845,000	1,107,000	922,500	922,500	6,642,000
7.2	All other actions - covered under Strategy 1	0	0	0	0	0	-
S8	**Improve Land use planning and road network management**						**40,180,000**
8.1	Development of NMT friendly urban planning guidelines	1,435,000	4,305,000	-	-	-	5,740,000
8.2	Monitoring and evaluation of NMT friendly land use guidelines and reporting to the NRSA	-	-	-	-	615,000	615,000
8.3	Actions to improve safety of road networks (to be funded directly under the RFB)	2,050,000	4,100,000	9,225,000	9,225,000	9,225,000	33,825,000

8.4	Monitoring and evaluation by the NRSA of actions under National Roads Agency and Local government	-	-	205,000	205,000	205,000	615,000
S9	**Improve pre-hospital and hospital trauma management services**						**26,752,500**
9.1	Establish/strengthen National response system and response units at district level	205,000	2,050,000	2,050,000	4,100,000	2,050,000	10,455,000
9.2	Publicize national emergency number and how to access response services	0	102,500	205,000	102,500	102,500.0	512,500
9.3	Build capacity of health centres receiving RTI victims	1,435,000	2,050,000	4,100,000	4,100,000	4,100,000	15,785,000
S10	**Improve safety of motorcycle riders and their passengers**						**6,498,500**
10.1	Reform/ strengthen the training and testing of motorcyclists	410,000	820,000	615,000	451,000	451,000	2,747,000
10.2	Information campaigns targetting (a) motorcyclists and (b) motor vehicle drivers	615,000	922,500	738,000	738,000	738,000	3,751,500
	Total allocated expenditure						**203,811,000**
	Balance to be allocated						**1,189,000**

	Partner State:	**Rwanda**					
	Total five year budget in US $		**50,000,000**				
Sn	**Action**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
S1	**Systematic information campaigns and enforcement**						**18,675,000**
1.1	Promote road safety as a core government business	250,000	125,000	75,000	50,000	25,000	525,000
1.2	Amend road safety laws	150,000	50,000				200,000
1.3	Enforcement of safety laws (training and operations)	1,000,000	1,200,000	1,300,000	1,400,000	1,700,000	6,600,000
1.4	Procure enforcement equipment (motorbikes, breath-analyzers, speed radars etc.)	500,000	900,000	1,100,000	1,000,000	800,000	4,300,000
1.5	Targetted information campaigns	750,000	1,350,000	1,650,000	1,500,000	1,200,000	6,450,000
1.6	Implement ICT based enforcement (speed cameras etc) through PPP	400,000	200,000	-	-	-	600,000
S2	**Institutional reform, capacity building and sustainable funding**						**8,650,000**
2.1	Reform the RSMS including establishment of NRSA and related agencies						
2.2	Establish road safety fund (RSF)	400,000	800,000	1,200,000	1,600,000	1,800,000	5,800,000
2.3	Capacity building including training, learning by doing, technical assistance	150,000	300,000	600,000	300,000	450,000	1,800,000
2.4	Develop, publish and promote a five year National Road Safety Strategy based on the framework for the development of an EARSM. Evaluate, develop and publish new strategy during year 5	350,000	175,000	-	-	525,000	1,050,000
S3	**Improve road safety data management**						**1,750,000**
3.1	All actions identified under the strategy	250,000	500,000	500,000	250,000	250,000	1,750,000
							-

S4	**Improve road safety research**						**1,950,000**
4.1	All actions identified for the strategy other than contracted research	200,000	100,000	100,000	100,000	100,000	600,000
4.2	Contracted research including capacity building component for research institutes	150,000	450,000	375,000	150,000	225,000	1,350,000
							-
S5	**Driver and vehicle examination and licensing**						**4,350,000**
5.1	Vehicle inspection and licensing project	1,000,000	2,000,000	-	-	-	3,000,000
5.2	Driver testing and licensing project	450,000	900,000	-	-	-	1,350,000
S6	**Road safety education (RSE) in schools**						**730,000**
6.1	RSE status review	100,000					100,000
6.2	Develop and publish RSE curriculum for Primary and Secondary schools and for Teachers Colleges	-	300,000	130,000	-	-	430,000
6.3	Implement new RSE curriculum, monitor, evaluate and report to the NRSA				100,000	100,000	200,000
S7	**Improve public transport supply and safety**						**1,620,000**
7.1	Information campaigns focused on PSV operators, drivers and users	450,000	450,000	270,000	225,000	225,000	1,620,000
7.2	All other actions - covered under Strategy 1	0	0	0	0	0	-
S8	**Improve Land use planning and road network management**						**9,800,000**
8.1	Development of NMT friendly urban planning guidelines	350,000	1,050,000	-	-	-	1,400,000
8.2	Monitoring and evaluation of NMT friendly land use guidelines and reporting to the NRSA	-	-	-	-	150,000	150,000

8.3	Actions to improve safety of road networks (to be funded directly under the RFB)	500,000	1,000,000	2,250,000	2,250,000	2,250,000	8,250,000
8.4	Monitoring and evaluation by the NRSA of actions under National Roads Agency and Local government	-	-	50,000	50,000	50,000	150,000
S9	**Improve pre-hospital and hospital trauma management services**						**6,525,000**
9.1	Establish/strengthen National response system and response units at district level	50,000	500,000	500,000	1,000,000	500,000	2,550,000
9.2	Publicize national emergency number and how to access response services	0	25,000	50,000	25,000	25,000.0	125,000
9.3	Build capacity of health centres receiving RTI victims	350,000	500,000	1,000,000	1,000,000	1,000,000	3,850,000
S10	**Improve safety of motorcycle riders and their passengers**						**1,475,000**
10.1	Reform and strengthen the training and testing of motorcyclists	100,000	200,000	150,000	110,000		560,000
10.2	Information campaigns targetting (a) motorcyclists and (b) motor vehicle drivers	150,000	225,000	180,000	180,000	180,000	915,000
	Total allocated expenditure						**49,600,000**
	Balance to be allocated						**400,000**

	Partner State:	**TANZANIA - MAINLAND**					
	Total five year budget in US $		**250,000,000**				
Sn	**Action**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
S1	**Systematic information campaigns and enforcement**						**93,375,000**
1.1	Promote road safety as a core government business	1,250,000	625,000	375,000	250,000	125,000	2,625,000
1.2	Amend road safety laws	750,000	250,000				1,000,000
1.3	Enforcement of safety laws (training and operations)	5,000,000	6,000,000	6,500,000	7,000,000	8,500,000	33,000,000
1.4	Procure enforcement equipment (motorbikes, breath-analyzers, speed radars etc.)	2,500,000	4,500,000	5,500,000	5,000,000	4,000,000	21,500,000
1.5	Targeted information campaigns	3,750,000	6,750,000	8,250,000	7,500,000	6,000,000	32,250,000
1.6	Implement ICT based enforcement (speed cameras etc) through PPP	2,000,000	1,000,000	-	-	-	3,000,000
S2	**Institutional reform, capacity building and sustainable funding**						**43,250,000**
2.1	Reform the RSMS including establishment of NRSA and related agencies						
2.2	Establish road safety fund (RSF)	2,000,000	4,000,000	6,000,000	8,000,000	9,000,000	29,000,000
2.3	Capacity building including training, learning by doing, technical assistance	750,000	1,500,000	3,000,000	1,500,000	2,250,000	9,000,000
2.4	Develop, publish and promote a five year National Road Safety Strategy based on the framework for the development of an EARSM. Evaluate, develop and publish new strategy during year 5	1,750,000	875,000	-	-	2,625,000	5,250,000
S3	**Improve road safety data management**						**8,750,000**
3.1	All actions identified under the strategy	1,250,000	2,500,000	2,500,000	1,250,000	1,250,000	8,750,000

S4	**Improve road safety research**						**9,750,000**
4.1	All actions identified for the strategy other than contracted research	1,000,000	500,000	500,000	500,000	500,000	3,000,000
4.2	Contracted research including capacity building component for research institutes	750,000	2,250,000	1,875,000	750,000	1,125,000	6,750,000
S5	**Driver and vehicle examination and licensing**						**21,750,000**
5.1	Vehicle inspection and licensing project	5,000,000	10,000,000	-	-	-	15,000,000
5.2	Driver testing and licensing project	2,250,000	4,500,000	-	-	-	6,750,000
S6	**Road safety education (RSE) in schools**						**3,650,000**
6.1	RSE status review	500,000					500,000
6.2	Develop and publish RSE curriculum for Primary and Secondary schools and for Teachers Colleges	-	1,500,000	650,000	-	-	2,150,000
6.3	Implement new RSE curriculum, monitor, evaluate and report to the NRSA				500,000	500,000	1,000,000
S7	**Improve public transport supply and safety**						**8,100,000**
7.1	Information campaigns focused on PSV operators, drivers and users	2,250,000	2,250,000	1,350,000	1,125,000	1,125,000	8,100,000
7.2	All other actions - covered under Strategy 1	0	0	0	0	0	-
S8	**Improve Land use planning and road network management**						**49,000,000**
8.1	Development of NMT friendly urban planning guidelines	1,750,000	5,250,000	-	-	-	7,000,000
8.2	Monitoring and evaluation of NMT friendly land use guidelines and reporting to the NRSA	-	-	-	-	750,000	750,000

8.3	Actions to improve safety of road networks (to be funded directly under the RFB)	2,500,000	5,000,000	11,250,000	11,250,000	11,250,000	41,250,000
8.4	Monitoring and evaluation by the NRSA of actions under National Roads Agency and Local government	-	-	250,000	250,000	250,000	750,000
S9	**Improve pre-hospital and hospital trauma management services**						**32,625,000**
9.1	Establish/strengthen National response system and response units at district level	250,000	2,500,000	2,500,000	5,000,000	2,500,000	12,750,000
9.2	Publicize national emergency number and how to access response services	0	125,000	250,000	125,000	125,000.0	625,000
9.3	Build capacity of health centres receiving RTI victims	1,750,000	2,500,000	5,000,000	5,000,000	5,000,000	19,250,000
S10	**Improve safety of motorcycle riders and their passengers**						**7,925,000**
10	Reform/ strengthen the training and testing of motorcyclists	500,000	1,000,000	750,000	550,000	550,000	3,350,000
10	Information campaigns targeting (a) motorcyclists and (b) motor vehicle drivers	750,000	1,125,000	900,000	900,000	900,000	4,575,000
	Total allocated expenditure						**248,550,000**
	Balance to be allocated						**1,450,000**

	Partner State:	**TANZANIA - ZANZIBAR**					
	Total five year budget in US $		**10,000,000**				
Sn	**Action**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
S1	**Systematic information campaigns and enforcement**						**3,735,000**
1.1	Promote road safety as a core government business	50,000	25,000	15,000	10,000	5,000	105,000
1.2	Amend road safety laws	30,000	10,000				40,000
1.3	Enforcement of safety laws (training and operations)	200,000	240,000	260,000	280,000	340,000	1,320,000
1.4	Procure enforcement equipment (motorbikes, breath-analyzers, speed radars etc.)	100,000	180,000	220,000	200,000	160,000	860,000
1.5	Targeted information campaigns	150,000	270,000	330,000	300,000	240,000	1,290,000
1.6	Implement ICT based enforcement (speed cameras etc) through PPP	80,000	40,000	-	-	-	120,000
S2	**Institutional reform, capacity building and sustainable funding**						**1,730,000**
2.1	Reform the RSMS including establishment of NRSA and related agencies						
2.2	Establish road safety fund (RSF)	80,000	160,000	240,000	320,000	360,000	1,160,000
2.3	Capacity building including training, learning by doing, technical assistance	30,000	60,000	120,000	60,000	90,000	360,000
2.4	Develop, publish and promote a five year National Road Safety Strategy based on the framework for the development of an EARSM. Evaluate, develop and publish new strategy during year 5	70,000	35,000	-	-	105,000	210,000
S3	**Improve road safety data management**						**350,000**
3.1	All actions identified under the strategy	50,000	100,000	100,000	50,000	50,000	350,000

S4	**Improve road safety research**						**390,000**
4.1	All actions identified for the strategy other than contracted research	40,000	20,000	20,000	20,000	20,000	120,000
4.2	Contracted research including capacity building component for research institutes	30,000	90,000	75,000	30,000	45,000	270,000
S5	**Driver and vehicle examination and licensing**						**870,000**
5.1	Vehicle inspection and licensing project	200,000	400,000	-	-	-	600,000
5.2	Driver testing and licensing project	90,000	180,000	-	-	-	270,000
S6	**Road safety education (RSE) in schools**						**146,000**
6.1	RSE status review	20,000					20,000
6.2	Develop and publish RSE curriculum for Primary and Secondary schools and for Teachers Colleges	-	60,000	26,000	-	-	86,000
6.3	Implement new RSE curriculum, monitor, evaluate and report to the NRSA				20,000	20,000	40,000
S7	**Improve public transport supply and safety**						**324,000**
7.1	Information campaigns focused on PSV operators, drivers and users	90,000	90,000	54,000	45,000	45,000	324,000
7.2	All other actions - covered under Strategy 1	0	0	0	0	0	-
S8	**Improve Land use planning and road network management**						**1,960,000**
8.1	Development of NMT friendly urban planning guidelines	70,000	210,000	-	-	-	280,000
8.2	Monitoring and evaluation of NMT friendly land use guidelines and reporting to the NRSA	-	-	-	-	30,000	30,000
8.3	Actions to improve safety of road networks (to be funded directly under the RFB)	100,000	200,000	450,000	450,000	450,000	1,650,000

8.4	Monitoring and evaluation by the NRSA of actions under National Roads Agency and Local government	-	-	10,000	10,000	10,000	30,000
S9	**Improve pre-hospital and hospital trauma management services**						**1,305,000**
9.1	Establish/strengthen National response system and response units at district level	10,000	100,000	100,000	200,000	100,000	510,000
9.2	Publicize national emergency number and how to access response services	0	5,000	10,000	5,000	5,000.0	25,000
9.3	Build capacity of health centres receiving RTI victims	70,000	100,000	200,000	200,000	200,000	770,000
S10	**Improve safety of motorcycle riders and their passengers**						**317,000**
10	Reform/ strengthen the training and testing of motorcyclists	20,000	40,000	30,000	22,000	22,000	134,000
10	Information campaigns targeting (a) motorcyclists and (b) motor vehicle drivers	30,000	45,000	36,000	36,000	36,000	183,000
	Total allocated expenditure						**9,942,000**
	Balance to be allocated						**58,000**

	Partner State:	**UGANDA**					
	Total five year budget in US $		**230,000,000**				
Sn	**Action**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
S1	**Systematic information campaigns and enforcement**						**85,905,000**
1.1	Promote road safety as a core government business	1,150,000	575,000	345,000	230,000	115,000	2,415,000
1.2	Amend road safety laws	690,000	230,000				920,000
1.3	Enforcement of safety laws (training and operations)	4,600,000	5,520,000	5,980,000	6,440,000	7,820,000	30,360,000
1.4	Procure enforcement equipment (motorbikes, breath-analyzers, speed radars etc.)	2,300,000	4,140,000	5,060,000	4,600,000	3,680,000	19,780,000
1.5	Targetted information campaigns	3,450,000	6,210,000	7,590,000	6,900,000	5,520,000	29,670,000
1.6	Implement ICT based enforcement (speed cameras etc) through PPP	1,840,000	920,000	-	-	-	2,760,000
S2	**Institutional reform, capacity building and sustainable funding**						**39,790,000**
2.1	Reform the RSMS including establishment of NRSA and related agencies						
2.2	Establish road safety fund (RSF)	1,840,000	3,680,000	5,520,000	7,360,000	8,280,000	26,680,000
2.3	Capacity building including training, learning by doing, technical assistance	690,000	1,380,000	2,760,000	1,380,000	2,070,000	8,280,000
2.4	Develop, publish and promote a five year National Road Safety Strategy based on the framework for the development of an EARSM. Evaluate, develop and publish new strategy during year 5	1,610,000	805,000	-	-	2,415,000	4,830,000
S3	**Improve road safety data management**						**8,050,000**
3.1	All actions identified under the strategy	1,150,000	2,300,000	2,300,000	1,150,000	1,150,000	8,050,000
S4	**Improve road safety research**						

							8,970,000
4.1	All actions identified for the strategy other than contracted research	920,000	460,000	460,000	460,000	460,000	2,760,000
4.2	Contracted research including capacity building component for research institutes	690,000	2,070,000	1,725,000	690,000	1,035,000	6,210,000
S5	**Driver and vehicle examination and licensing**						**20,010,000**
5.1	Vehicle inspection and licensing project	4,600,000	9,200,000	-	-	-	13,800,000
5.2	Driver testing and licensing project	2,070,000	4,140,000	-	-	-	6,210,000
S6	**Road safety education (RSE) in schools**						**3,358,000**
6.1	RSE status review	460,000					460,000
6.2	Develop and publish RSE curriculum for Primary and Secondary schools and for Teachers Colleges	-	1,380,000	598,000	-	-	1,978,000
6.3	Implement new RSE curriculum, monitor, evaluate and report to the NRSA				460,000	460,000	920,000
S7	**Improve public transport supply and safety**						**7,452,000**
7.1	Information campaigns focused on PSV operators, drivers and users	2,070,000	2,070,000	1,242,000	1,035,000	1,035,000	7,452,000
7.2	All other actions - covered under Strategy 1	0	0	0	0	0	-
S8	**Improve Land use planning and road network management**						**45,080,000**
8.1	Development of NMT friendly urban planning guidelines	1,610,000	4,830,000	-	-	-	6,440,000
8.2	Monitoring and evaluation of NMT friendly land use guidelines and reporting to the NRSA	-	-	-	-	690,000	690,000
8.3	Actions to improve safety of road networks (to be funded directly under the RFB)	2,300,000	4,600,000	10,350,000	10,350,000	10,350,000	37,950,000

8.4	Monitoring and evaluation by the NRSA of actions under National Roads Agency and Local government	-	-	230,000	230,000	230,000	690,000
S9	**Improve pre-hospital and hospital trauma management services**						**30,015,000**
9.1	Establish/strengthen National response system and response units at district level	230,000	2,300,000	2,300,000	4,600,000	2,300,000	11,730,000
9.2	Publicize national emergency number and how to access response services	0	115,000	230,000	115,000	115,000.0	575,000
9.3	Build capacity of health centres receiving RTI victims	1,610,000	2,300,000	4,600,000	4,600,000	4,600,000	17,710,000
S10	**Improve safety of motorcycle riders and their passengers**						**7,291,000**
10.1	Reform/ strengthen the training and testing of motorcyclists	460,000	920,000	690,000	506,000	506,000	3,082,000
10.2	Information campaigns targetting (a) motorcyclists and (b) motor vehicle drivers	690,000	1,035,000	828,000	828,000	828,000	4,209,000
	Total allocated expenditure						**228,666,000**
	Balance to be allocated						**1,334,000**

APPENDIX 3: INSTRUMENT FOR ASSESSING ROAD SAFETY MANAGEMENT SYSTEM CAPACITY DEVELOPMENT

Part 1: Results focus at system level

Questions	Yes	Partial	Pending	No
1) Are estimates of the social costs of crashes available?				
2) Are data on road deaths and injury readily available?				
3) Have the risks faced by the road users been identified?				
1. Drivers?				
2. Passengers?				
3. Motorcyclists?				
4. Pedestrians?				
5. Cyclists?				
6. Children?				
7. Others: ……..				
4) Has a national vision for improving road safety performance in the long-term been officially set?				
5) Have national and regional targets been set for improved road safety performance?				
1. Social costs targets?				
2. Final outcomes targets?				
3. Intermediate outcomes targets?				
4. Intervention outputs targets?				
5. At risk group targets?				
6. Industry targets?				
7. NGO targets?				
6) Have all departments/agencies responsible for improved road safety performance been identified and are they formally held to account for their performance required to achieve focus on results?				
1. Lead agency?				
2. Transport?				
3. Roads?				
4. Police?				
5. Planning- Land-use?				
6. Health?				
7. Justice?				
8. Education?				
9. Standards?				
10. Local Governments?				
11. Others?				
7) Have industry, community and business responsibilities for improved road safety performance been clearly defined to achieve the desired focus on results?				
8) Are regular performance reviews conducted to assess progress and make improvements to achieve the desired focus on results?				
9) Has a lead agency been formally established to direct the national road safety effort to achieve the desired focus on results?				
10) Is the lead agency role defined in legislation and/or policy documents and annual performance agreements to achieve the desired focus on results?				

Part 2: Planning, design, operation and use of the road network

Questions	Yes	Partial	Pending	No
1) Have comprehensive safety standards and rules and associated performance targets been set for the planning, design, operation and use of roads to achieve the desired focus on results?				
1. National roads?				
2. Regional roads?				
3. District roads?				
4. Urban roads?				
2) Are the official speed limits aligned with safe system design principles to achieve the desired focus on results?				
1. National roads?				
2. Regional roads?				
3. District roads?				
4. Urban roads?				
3) For each category of roads are compliance regimes in place to ensure adherence to specified safety standards and rules to achieve the desired focus on results?				
1. Road safety impact assessment?				
2. Road safety audit?				
3. Road safety inspection?				
4. Hazardous locations management?				
5. Network safety management?				
6. Speed management?				
7. Alcohol management?				
8. Safety belts management?				
9. Helmets management?				
10. Fatigue management?				
4) Do the specified safety standards and rules and related compliance regimes clearly address the safety priorities of high-risk road user groups to achieve the desired focus on results?				
5) Do the specified safety standards and rules and related compliance regimes compare favourably with international good practice?				

Part 3: Entry and exit of vehicles to and from the road network

Questions	Yes	Partial	Pending	No
1) Have comprehensive safety standards and rules and associated performance targets been set to govern the entry and exit of vehicles and related safety equipment to and from the road network to achieve the desired focus on results?				
a. Private vehicles?				
b. Commercial vehicles?				
c. Public transport vehicles?				
d. Motorcycle helmets?				
e. Cycle helmets?				
2) For each category of vehicles and safety equipment (private, commercial, public, helmets) are compliance regimes in place to ensure adherence to the specified safety standards and rules to achieve the desired focus on results?				
a. Vehicle certification?				
b. Vehicle inspection?				
c. Helmet certification?				
3) Do the specified safety standards and rules and related compliance regimes and safety rating surveys clearly address the safety priorities of high-risk road user groups to achieve the desired focus on results?				
4) Do the specified safety standards and rules and related compliance regimes and safety rating surveys compare favourably with international good practice?				

Part 4: Entry and exit of road users to and from the road network

Questions	Yes	Partial	Pending	No
1) Have comprehensive safety standards and rules and associated performance targets been set to govern the entry and exit of road users to and from the road network to achieve the desired focus on results?				
Private drivers and passengers?				
a. Cars?				
b. Heavy vehicles?				
c. Motorcycles?				
Commercial drivers?				
Public transport drivers?				
d. Buses?				
e. Taxis?				
f. Bajajis/motorcycles?				
g. NMT vehicles?				
2) For each category of driver (private, commercial, public) are compliance regimes in place to ensure adherence to the specified safety standards and rules to achieve the desired focus on results?				
a. Driver testing?				
b. Roadside checks?				
3) Do the specified safety standards and rules and related compliance regimes clearly address the safety priorities of high-risk road user groups to achieve the desired focus on results?				
a. Young drivers?				
b. Commercial drivers?				
c. Public transport drivers?				
4) Do the specified safety standards and rules and related compliance regimes compare favourably with international good practice?				

Part 5: Recovery and rehabilitation of crash victims from the road network

Questions	Yes	Partial	Pending	No
1) Have comprehensive safety standards and rules and associated performance targets been set to govern the recovery and rehabilitation of crash victims from the road network to achieve the desired focus on results?				
a. Pre-hospital?				
b. Hospital?				
c. Long-term care?				
2) For each category of post-crash service (pre-hospital, hospital and long-term care) are compliance regimes in place to ensure adherence to the specified safety standards and rules to achieve the desired focus on results?				
3) Do the specified safety standards and rules and related compliance regimes clearly address the safety priorities of high-risk road user groups to achieve the desired focus on results?				
4) Do the specified safety standards and rules and related compliance regimes compare favourably with international good practice?				

Part 6: Coordination

Questions	Yes	Partial	Pending	No
1) Are interventions being coordinated horizontally across agencies to achieve the desired focus on results?				
2) Are interventions being coordinated vertically between national, regional, district and city/municipal agencies to achieve the desired focus on results?				
3) Have robust intervention delivery partnership between agencies, industry, community, and business sector been established to achieve the desired focus on results?				
4) Have parliamentary committees and procedures supporting the coordination process been established to achieve the desired focus on results?				

Part 7: Legislation

Questions	Yes	Partial	Pending	No
1) Are legislative instruments and procedures supporting interventions and other institutional management functions sufficient to achieve the desired focus on results?				
2) Are legislative instruments and procedures supporting interventions and other institutional management functions regularly reviewed and reformed to achieve the required focus on results?				

Part 8: Funding and resource allocation

Questions	Yes	Partial	Pending	No
1) Are sustainable funding mechanisms supporting interventions and other institutional management functions in place to achieve desired focus on results? 1. Central budget? 2. Road fund? 3. Tolls? 4. Fees? 5. Other sources?				
2) Are formal resource allocation procedures supporting interventions and institutional management functions in place to achieve desired focus on results? 1. Cost effectiveness? 2. Cost benefit?				
3) Is there an official value of statistical life and related value for injuries to guide resource allocation decisions?				
4) Are funding mechanisms and resource allocation procedures supporting interventions and institutional management functions sufficient to achieve desired focus on results?				

Part 9: Promotion

Questions	Yes	Partial	Pending	No
Is road safety regularly promoted to achieve the desired focus on results? 1. Overall vision and goals? 2. Specific interventions? 3. Specific target groups?				

Part 10: Monitoring and evaluation

Questions	Yes	Partial	Pending	No
1) For all categories of roads (national, regional, district and urban) are sustainable systems in place to collect and manage data on road crashes, fatality and injury outcomes and related road environment/vehicle/road user factors to achieve the desired focus on results?				
2) For each category of roads are sustainable systems in place to collect and manage data on road network traffic, vehicle speeds, safety belt and helmet wearing rates, to achieve the desired focus on results?				
3) For each category of roads is systematic and regular safety rating surveys undertaken to quality-assure adherence to specified safety standards and rules to achieve the desired focus on results? 1. Risk ratings? 2. Road protection scores				
4) For each category of roads are systems in place to collect and manage data on the output quantities and qualities of safety interventions implemented to achieve the desired focus on results? 1. Safety engineering treatments? 2. Police operations? 3. Educational activities?				

4. Promotional activities? 5. Driver training? 6. Vehicle testing? 7. Emergency medical services?				
5) For each category of vehicle and safety equipment (private, commercial, public, helmets) are systematic and regular safety rating surveys undertaken to quality assure adherence to the specified safety standards and rules to achieve the desired focus on results? 1. Vehicle safety ratings? 2. Helmet testing?				
6) For each category of post-crash service (pre-hospital, hospital, and long-term care) is systematic and regular survey undertaken to quality-assure adherence to the specified standards and rules to achieve the desired focus on results?				
7) Are regular surveys taken of road user and community attitudes to road safety interventions to achieve the desired focus on results?				
8) Are systems in place to monitor and evaluate safety performance against targets regularly to achieve the desired focus on results?				
9) Do all participating agencies and external partners and stakeholders have open access to all data collected?				

Part 11: Research, Development and Knowledge Transfer

Questions	Yes	Partial	Pending	No
1) Have a national road safety research and development strategy been established to achieve the desired focus on results? 1. Vehicle factors? 2. Highway factors? 3. Human factors? 4. Institutional factors? 5. Other factors?				
2) Have an independent national road safety research organization been established to achieve the desired focus on results? 1. Vehicle factors? 2. Highway factors? 3. Human factors? 4. Institutional factors? 5. Other factors?				
3) Have demonstration and pilot programmes been conducted to achieve the desired focus on results? 1. Vehicle factors? 2. Highway factors? 3. Human factors? 4. Institutional factors? 5. Other factors?				
4) Are mechanisms and media in place to disseminate the findings of national road safety research and development to achieve the desired focus on results? 1. Conferences? 2. Seminars? 3. Training? 4. Journals? 5. Other?				

Part 12: Lead Agency role and institutional management functions

Questions	Yes	Partial	Pending	No
1) Does the lead agency (or the de facto lead agency) effectively contribute to the results focus management function? 1. Appraising current road safety performance through high-level strategic review? 2. Adopting a far-reaching road safety vision for the longer term? 3. Analyzing what could be achieved in the medium term? 4. Setting quantitative targets by mutual consent across the road safety partnership? 5. Establishing a mechanism to ensure partner and stakeholder accountability for results?				
2) Does the lead agency (or the de facto lead agency) effectively contribute to the coordination management function? 1. Horizontal coordination across central government? 2. Vertical coordination from central to regional to local levels of government? 3. Specific delivery partnership between government, non-government, community and business at the central, regional and local levels? 4. Parliamentary relations at central and local levels?				
3) Does the lead agency (or the de facto lead agency) effectively contribute to the legislation management function? 1. Reviewing the scope of the legislative framework? 2. Developing legislation needed for the road safety strategy? 3. Consolidating legislation? 4. Securing legislative resources for road safety?				
4) Does the lead agency (or the de facto lead agency) effectively contribute to the funding and resource allocation management function? 1. Ensuring sustainable funding sources? 2. Establishing procedures to guide the allocation of resources across safety programmes?				
5) Does the lead agency (or the de facto lead agency) effectively contribute to the promotion management function? 1. Promotion of far-reaching road safety vision or goal? 2. Championing and promotion at a high level? 3. Multi-sectoral promotion of effective interventions and shared responsibility? 4. Leading by example with in-house road safety policies? 5. Developing and supporting safety rating programs and the publication of their results? 6. Carrying out national advertising? 7. Encouraging promotion at the local level?				
6) Does the lead agency (or de facto lead agency) effectively contribute to the monitoring and evaluation management function? 1. Establishing and supporting data systems to set and monitor final and intermediate outcome and output targets? 2. Transparent review of the national road safety strategy and its performance? 3. Making any necessary adjustments to achieve the desired focus on results?				
7) Does the lead agency (or the de facto lead agency) effectively contribute to the research, development and knowledge transfer management function? 1. Developing capacity for multi-disciplinary research and knowledge transfer?				

2. Creating a national road safety research strategy and annual programme? 3. Securing sources of sustainable funding for road safety research? 4. Training and professional exchange? 5. Establishing good practice guidelines? 6. Setting up demonstration projects?				

FINAL REPORT

ANNEX E

HARMONISATION OF OVERLOAD CONTROL

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GLOSSARY AND ACRONYMS

AADTT	Average Annual Daily Truck Traffic
ASANRA	Association of Southern Africa National Roads Authorities
AU	African Union
CBOCS	Cross Border Overload Control System
COMESA	Common Market for East and Southern Africa
EAC	East African Community
ESA	Eastern and Southern Africa
ESA	Equivalent Standard Axle
FESARTA	Federation of East and Southern Africa Transporters Association
GCM	Gross Combination Mass
GVM	Gross Vehicle Mass
HGV	Heavy Goods Vehicle
HSWIM	High Speed Weigh- in- Motion
KeNHA	Kenya National Highway Authority
LSWIM	Low Speed Weighing in Motion
MLP	Model Legislative Provisions
MoU	Memorandum of Understanding
OC	Overload Control
OSBP	One Stop Border Post
PPP	Public-Private Partnership
REC	Regional Economic Community
SADC	Southern Africa Development Community
SATCC	Southern Africa Transport Coordinating Commission
SRO	Sub-Regional Organisation
SSA	Sub-Saharan Africa
SSATP	Sub Saharan Africa Transport Policy Program
TANROADS	Tanzania National Roads Agency
TAORT	Tripartite Agreement on Road Transport
VOC	Vehicle Operating Costs
vpd	Vehicles per day
WCC	Weighbridge Clearance Certificate
WG	Working Group
WIM	Weigh-in-Motion

EXECUTIVE SUMMARY

The importance of efficient transit transport systems for East Africa cannot be over-emphasized; transportation and transaction costs are key determinants of the competitive and comparative advantages that impact on the economies of the countries in the East African Community (EAC). The drive towards harmonization of motor vehicle overload control in the EAC, COMESA and SADC is underscored in several regional agreements developed by the same organisations. At the level of the EAC, the Treaty implores the Partner States to move towards harmonization of their regulations on overload control and weighbridges. Of prime importance is Article 90 which requires Partner States to among other things, adopt common rules and regulations governing the dimensions, technical requirements, gross weight and load per axle of vehicles used in the trunk roads within the Community.

This study proposes a common training curriculum for weighbridge personnel, uniform printout certificate and reporting formats, a framework for interconnection of weighbridges, and the legal instruments.

Development of a Common Training Curriculum for Weighbridge Personnel

The main objective of the training is to ensure that weighbridge operations are carried out efficiently and at high standard and in consistent manner throughout the region. The training will be tailored to prepare weighbridge staff to perform their duties by providing knowledge and skills to:

- Understand the importance of overload control and adhere to the legislative requirements
- Understand the legal obligations and duties of an operator
- Understand basic terms associated with the operation of a weighbridge
- Make accurate measurements
- Understand the working principle of the equipment and how the accuracy of the measurement may be affected
- Complete measurement tickets, associated documentation and charge consistent fees and penalties to offenders.

The proposed training syllabus is divided into nine modules which are arranged as follows:

Module 1: Introduction (*Background to REC, Transport corridors in REC, Road Transport, and Overloading Control*)
Module 2: Legislations and Regulations on Overload Control
Module 3: Vehicles Dimensions, Combination, and Axle configurations
Module 4: Traffic Management Centers and Weighbridge Equipment
Module 5: Screening and Weighing Operations
Module 6: Administrative Procedures and Prosecutions
Module 7: Introduction to types of weighbridge software
Module 8: Environment pollution, workplace safety, customer service, work ethics and Professionalism
Module 9: Practical Training

The full syllabus showing the topics in each module and categories of staff which are compulsory to attend are in Appendix 1.

The training is designed for weighbridge staff in EAC countries. Participants to the training must be employees of the Road Authorities from respective EAC countries who are directly dealing with overload control. Hence, each country has to ensure that it employs appropriate personnel for the

various positions in the weighbridge station and other staff who are dealing with overload control. In addition to that, participants to the training must possess at least the following:

- Certificate in Advanced Level Secondary School (form six) or equivalent
- Should be able to communicate (speak, write, and read) in English.

The knowledge and skills attained by the participants will be evaluated by:

- Assignments (20%)
- Tests (20%)
- Practical Training (20%)
- Final examination (40%)

Participants will be required to write a Practical Training report which shall be evaluated for final grading. The report shall be in the form of assignment, e.g., on how to improve a certain aspect of the screening, weighing or administrative operation. The overall performance of the participants will be graded and successful candidates who are in the position of operators will be given certificates as Qualified Weighbridge Operator.

The selection for the place to host training facilities within EAC will depend on:

- The location to be **near Category A or B Traffic Management Center:** This will provide full range of Traffic Management and overload control equipment for the participants to train
- **Logistics:** The training facility should be easier to be reached by participants from all EAC countries.

The training facility must have a high quality standard and should be accredited by the appropriate education body of the hosting country. This will also ensure that certified participants are recognized weighbridge operators and are competent and can work in any weighbridge facility in the world.

The total duration of training should be 4 weeks. The recommended syllabus for theoretical training of the modules shall take 14 training days (3 weeks), and practical training is recommended to be conducted for 4 days. Two (2) days are reserved for continuous assessment tests and the final examination which will be conducted after the Practical Training. Participants will be required to write a report on the daily activities conducted during the practical training.

Additionally, we recommend that there should be a common Weighbridge Operation Manual which should be used in all EAC countries. At the beginning of its operation, the Training Facility should conduct training after every 2 months to clear the backlog of untrained staff. This will also enable the management to plan training for their staff comfortably without facing shortage of staff at the station. Priority should be given to weighbridge equipment operators. Furthermore, there should be refresher training courses for each staff after every two years. This is important to enable staff to catch up with new technologies and tricks from transporters to overload.

Uniform Weighbridge Printout Certificate and Overload Reporting Formats

Having reviewed the existing practices in EAC and ESA, coupled with input from international literature review of the state-of-the-art and practice, recommendations with regard to data collection and verification, printout certificate and report types and formats are summarised in the following table. The arguments behind the recommendations and detailed information can be found in Chapter 3 of this Annex E.

SN	Issue	Recommendation
1	Data/ information to be collected at weighbridges	• Sequence number • Date and time of weighing • Weighbridge station • Region/province and country • Vehicle registration number(s) • Owners company name and address • Permit number (for abnormal loads) • Origin • Destination • Vehicle axle configuration • Permissible axle/axle unit masses/GVM • Actual axle/axle unit masses/GVM • Commodity transported • Off loading (Yes/No) • Action take (allowed to proceed, charged for overload, detained, etc) • Name of scale operator • Signature • Remark (if any)
2	Data verification	• The computer software should incorporate checks for invalid data as well as warnings for unrealistic ones (e.g. very high percentage of overloads) • Pick lists (drop down menus) should be used to ensure uniform spelling of various data items such as axle configuration, action taken, commodity, origin, destination and region
3	Weighbridge printout certificate	A uniform weighbridge printout certificate in the following figure is recommended for use across the EAC region. The data is automatically printed on A5 size paper; whether manually entered into the computer or automatically captured
4	Overload control reports and formats	The following statistics and reports (in the form of tables and figures) should be prepared from the overload control data and be shared among weighbridge stations which would be able to access them at a central database: • Vehicles weighed, overloaded and charged per month and per annum • Vehicles weighed, overloaded and charged per weighbridge • Daily and hourly weighing statistics • Average overloads • Maximum overloads • Distribution of vehicle overloads • Transport operator statistics • Vehicle class statistics • E80 statistics • Commodity statistics

THE EAST AFRICAN COMMUNITY

COUNTRY*

WEIGHBRIDGE PRINTOUT CERTIFICATE

Weighbridge Station:				Region:		Date:	Time(hrs):
Owner of Vehicle:							
Address of Owner of Vehicle:							
Types of Cargo:				Origin:		Destination:	
Transport Permit No.#:							
Vehicle Registration Nos.	Vehicle:			Semi trailer:		Trailer:	
Axle Configuration+:							
Axle No.	Axle Group	Load measured (Scale reading) (kg) (a)	Allowed Load (kg) (b)	Discretion Allowance (kg) ≤ 5% of (b) (c)	Adjusted Load (kg) (a - c) (d)	Overload (kg) (d-b) (e)	Overload Fee (currency) (From e)
1	Axle Group 1						
2	Axle Group 2						
3	Axle Group 3						
4	Axle Group 4						
5	Axle Group 5						
Sum of Axles - Fees (currency)							
Gross Vehicle Mass (GVM)							
Amount to be Paid^ (currency)							
Action Taken:							
Name of Weighbridge Operator:						Signature:	
Remarks:							

Notes:

* *Relevant country's name to appear here*

\# *For abnormal loads*

\+ *Axle configuration e.g.1.22 (2 axle groups), 1-22-222 (3 axle groups), 1-22+2-22 (4 axle groups)*

^ *Higher of either sum of axles or GVM fee*

Framework for Interconnection of Weighbridges for Monitoring, Storage and Sharing of Data

Having taken the inventory of existing weighbridges in EAC countries, reviewed the interconnectivity of weighbridges within member countries, data sharing and literature review, recommendations for interconnection of weighbridges and sharing of data were made as summarised in the following table. The arguments behind the recommendations and detailed information can be found in Chapter 4 of this Annex E.

SN	Issue	Recommendation
1	Selection of type of weighbridge	• Only electronic weighbridges should be used for overload control along the EAC road corridors • Only axle-unit and multi-deck weighbridge scales should be used along the EAC road corridors. The actual type of weighbridge should be decided based on the volume of heavy vehicles expected to be weighed in a day i.e. Multi-deck scale (>500 heavy vpd) and Axle-unit scale (<500 heavy vpd). Other factors should also be considered such as experience with equipment already in use, manufacturer's guarantee, maintenance, calibration and operation complexity. In the final analysis, the choice of weighbridge facility should be decided by carrying out a full life-cycle analysis of the status quo versus the proposed option • WIMs and mobile/portable scales should be used for screening purposes to reduce the number of trucks that need to be weighed at fixed weighbridges
2	Number and location of weighbridges	• The recommended number of weighbridges and their locations on the EAC corridors is based on an optimum spacing of 500 km and other strategic considerations. The following weighbridges are recommended on the corridors: o Kenya (Mariakani, Athi River, Gilgil, Malaba*) o Uganda (Malaba*, Masaka, Katuna*) o Tanzania (Vigwaza, Nala, Mwendakulima, Rusumo*) o Rwanda (Gatuna*, Kanyaru*, Rusumo*, Kigali) o Burundi (Kanyaru*, Bujumbura) • Individual countries may wish to have more weighbridges for internal use but transit trucks may only be subjected to overload weighing at the above stations • Weighbridges shall be installed at all the following border points which should operate as OSBPs: Rusumo, Gatuna/Katuna, Kagitumba/Mirama hills, Mutukula, Malaba, Busia, Namanga, Lunga lunga/Horohoro, Taveta/Holili, Sirari/Isebania, Gasenyi/Nemba, Ruhwa, Kanyaru/Akanyaru, Kobero/Kabanga, Mugina/Manyovu
3	Interconnection of weighbridges and information sharing	• There shall be established an EAC Overload Control Management System (OLCMS) for data storage, analysis and sharing between the various weighbridge stations on the EAC road corridors. The system shall be hosted at a centre to be decided by the EAC. • There shall be internet connection at each weighbridge station and a Local Area Network (LAN) within the station. Wireless connection through satellite dishes is recommended for weighbridges located in remote areas. Power should also be guaranteed using strong UPS and consideration should be given to solar power in isolated areas. • Each station should be part of the networked computers of other stations within the region forming a Wide Area Network (WAN). • In order for all data in each weighbridge to be accessible, a

SN	Issue	Recommendation
		server-based system is recommended where data accumulated at each weighbridge site is replicated at the central server on an ongoing basis. The input data as opposed to calculated data will be replicated for analysis centrally. • Data storage at each weighbridge station should be database driven. Weighbridge technologies that support data storage through database technologies such as SQLServer and MySQL are preferable. • Based on the type of system being recommended, customization of TRAFMAN weighbridge program as used in Kwa Zulu Natal is recommended in place of a completely new program. Professional database analysis and design will also be required. • A network design will be needed that will depict how the network backbone should be; what data should be shared, secured means of data communication, how should the authentication be, etc. • When new border facilities are being planned, provision should be made for not only locating the weighbridge within the customs area but, also, for sharing the weighbridge facility between the adjacent countries in a one-stop border post (OSBP) arrangement. • Two weighbridges are permissible at the OSBP using one for traffic flowing in one direction and the other for the traffic flowing in the opposite direction. • Weighbridges should be electronically linked to Customs at border posts so that outputs can be electronically viewed at Customs through access to the Overload Control Management System. • All offices handling transit goods such as weighbridges, customs, and immigration should be operational 24 hours, 7 days a week.

* OSBP

Preparation of Legal Instrument for Implementing Overload Control

The drive towards harmonization of motor vehicle overload control in the EAC, COMESA and SADC is underscored in several regional agreements developed by the same organisations. At the level of the EAC, the Treaty implores the Partner States to move towards harmonization of their regulations on overload control and weighbridges. Of prime importance is Article 90 which requires Partner States to among other things, adopt common rules and regulations governing the dimensions, technical requirements, gross weight and load per axle of vehicles used in the trunk roads within the Community. The bottom-line of Article 90 is the passage of a common or harmonized legislation regulating over load control in the region.

The approach towards harmonization of transport related legislation including overload control at international or regional level can be pursued in several ways. These include legal transplantation, legal harmonization and legal unification. Legal transplantation is a process whereby laws and legal institutions developed in one country are adopted by another country. This process is not common in transport mainly because transport is one of the areas where national specificities are very present. Legal harmonization relates to a group of countries agreeing on a set of objectives and targets and let each country amend its internal laws to fulfill the agreed objectives. This method was not recommended in this study in view of the previous developments made so far and given the fact that the current trend in the EAC is to move towards enacting uniform laws (Acts) in the region.

Legal unification, which was preferred in this study, involves a group of countries agreeing to replace their national rules and adopt a unified set of rules agreed at the interstate level. In the transport sector this type of harmonization is particularly used in the cases of harmonization of technical standards, as is the case in the present study. Accordingly, an EAC Act has been proposed based on the recommendations drawn below.

In recognition of other equally and important related study to the present, such as, the Study for the Harmonization of Vehicle Overload Control in the East African Community, August 2011 (by PADECO) and the Study on the Legal Framework for Introducing One Stop Border in East African and the Rusumo Post, March 2010 (by CDC Pty) coupled with other previous developments made in the region, it is the conclusion and recommendation of this study that a legal instrument in form a regional Act should be enacted to facilitate the process of harmonization in the region in the following specific areas:

- Inclusion in the legal instrument provisions on conditions for carriage of abnormal and awkward load
- Interconnectivity of weighbridges
- Mutual recognition of print-out certificate among Partner States
- Data management and sharing of data among weighing stations at national and regional level
- Training of authorised officers and operators of weighbridges and other related staff
- Format of a print-out certificate as a schedule to the Act.

1 INTRODUCTION

1.1 Background

The importance of efficient transit transport systems for East Africa cannot be over-emphasized. Transportation and transaction costs are key determinants of the competitive and comparative advantages that impact on the economies of the countries in the East African Community (EAC). When these costs are high, as is the case for East Africa, they not only suppress international trade, but also impact adversely on the general economic competitiveness of the countries which in turn frustrates the socio-economic growth and development of the region.

One of the problems facing the EAC region has been difficulty in achieving an effective, harmonized and coordinated system of overload control management along regional transport corridors and at adjacent borders. This applies to both vehicle load limits and a number of regulation as well as to joint planning and operation of weighbridge infrastructure (Pinard 2010a). The challenges that arise from the absence of a harmonized framework for overload control management along regional transport corridors manifest themselves at two levels. Firstly, in lack of regional harmonization of axle load limits which makes management difficult, and secondly, in lack of faith in the systems used in different countries, such that vehicles are sometimes weighed frequently, including at weighbridges a few kilometres apart but on different sides of a common border. All these result in excessive delay to trucks and increased transport costs in the region.

The EAC Tripartite Agreement on Road Transport (TAORT) was signed between the EAC Partner States of Kenya, Uganda and Tanzania in 1998 and subsequently amended in November 2001. The TAORT was aimed at standardizing road transport laws and regulations in the EAC to improve the efficiency of domestic, transit and cross-border road traffic. Rwanda and Burundi acceded to the Agreement following their entry into the Community in 2007 allowing harmonized regulations and operations to apply across the entire East African road network.

As well as being a member of the EAC, each of the five partner states belongs to other regional groupings i.e. the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC). This dual membership to regional groupings has occasionally led to a situation where the five countries apply different standards which could have conflicting objectives with the TAORT, whose goals are to standardize road transport laws and regulations in the EAC (ARC-RAISE 2001).

The COMESA secretariat organised a 2-day Workshop on Harmonisation of Key Elements and Implementation of Best Practice in Overload Control in the Eastern and Southern African Region in Nairobi, Kenya, on 10th and 11th July, 2008. The workshop was attended by a total of 56 delegates including 43 representing 13 countries in the Eastern and Southern African (ESA) region and the remainder from various regional organisations including the Federation of Eastern and Southern Africa Road Transport Associations (FESARTA) and a number of regional transporters associations (InfraAfrica 2008b).

The workshop was sponsored by the following three Regional Economic Communities (RECs) in the ESA region:

i. The Common Market for East and Southern Africa (COMESA);

ii. The Southern Africa Development Community (SADC);
iii. The East African Community (EAC).

Among the resolutions made at the workshop relevant to this thematic area are:

i. The three RECs to develop and facilitate the implementation of a harmonised data management system;
ii. The three RECs to adopt the SADC MOU and Model Legislative Provisions (MLP) on Vehicle Loading and Member States to review their overload control regulations and ensure compliance with the MOU and MLP;
iii. The three RECs to develop a strategic regional network of overload control stations on the major transport corridors.
iv. Member states should select appropriate weighbridge types based on traffic volumes, using the guidelines.
v. A cross-border overload control system linked to customs be introduced at all border posts along the regional corridors.
vi. The three RECs to introduce harmonised regional Weighbridge Clearance Certificates.
vii. The three RECs to support the relevant Sub-Regional Organisations (SROs) in their management and implementation of overload control programmes.
viii. The three RECs to pursue the establishment of a regional training centre for overload control utilising existing training facilities where possible.
ix. The three RECs to adopt a common syllabus for overload control training.
x. Member states to ensure that overload control personnel are adequately trained and accredited.

These resolutions provide the basis and direction for the harmonization of standards in EAC in line with the other Regional Economic Communities (RECs) in which different EAC countries belong.

Towards the same goal of harmonisation, JICA has conducted a study on “Harmonization of Vehicle Overload Control in the East African Community” and submitted a Draft Final Report in July 2011 (PADECO 2011). Consequently, JICA/PADECO held a second Task Force Meeting in Arusha, Tanzania on 10th May 2011 and a second Stakeholders Workshop in Nairobi, Kenya on 30th May 2011 where the following were agreed among EAC member countries:

- to develop and use harmonized operational manuals, weighbridge certificates, networking and auditing
- to operate a regional data management system for purposes of sharing information
- all weighbridge personnel to be trained under a regional curriculum
- to develop EAC Act and EAC Regulations.

1.2 Importance of Effective Overload Control

Road transport plays a fundamental role in the social and economic development of many developing countries and it provides a dominant mode in freight and passenger movement in East Africa. In order to attain acceptable levels of road transport efficiency, the management and maintenance of the road infrastructure constitute the most important strategies.

Road infrastructure represents huge investment for any country and therefore need to be protected against misuse and damage. Research around the world has shown that overloaded heavy vehicles

are responsible for approximately 60% of the damage to the road network. The purpose of overload control is therefore to:

- Protect the road infrastructure from excessive damage and premature failure
- Ensure a level playing field between transport operators
- Limit the extent of road maintenance required, and
- Improve safety

The primary function of the weighbridge unit is therefore to enforce axle load and vehicle/combination mass limits. Its main objective is to prevent overloaded vehicles from operating on the road network and, where vehicles have already travelled on the network, to prevent them from travelling further unless the load can be re-distributed or off-loaded to comply with the legal limits.

1.3 Objective of the Study

Annex E is a result of the fifth objective of the study under the Terms of Reference for the Preparation of a Transport Facilitation Strategy for the East African Community which constitutes the fifth Thematic Area (TM5) i.e. Harmonisation of Overload Control Regulations.

At the beginning of the project, this thematic area had six ToRs, namely:

TOR 1: Review of existing laws and regulations concerning overload control and propose areas for harmonization and improvements to be similar across EAC, COMESA and SADC regions.

TOR 2: Review of existing charges/fees/fines and methods of charging for axle overloading in the region and come up with harmonized strategies to be similar across EAC, COMESA and SADC regions.

TOR 3: Review of existing axle load and gross vehicle weight limit for various vehicle combinations for the region and harmonize them to be similar across EAC, COMESA and SADC regions.

TOR 4: Develop harmonized calibration standards for weighbridge equipment.

TOR 5: Develop a common training curriculum for weighbridge personnel.

TOR 6: Set up uniform weighbridge printout certificates and overload reporting formats across EAC region.

Some of these original tasks have been re-assigned to the JICA team and have been replaced with new ones. Currently, there are four ToRs, namely:

TOR 1: Develop a common training curriculum for weighbridge personnel.

TOR 2: Set up uniform weighbridge printout certificates and overload reporting formats across EAC region.

TOR 3: Propose a framework for interconnection of weighbridges in the region with a regional data centre for monitoring the performance of weighbridges and storage of data.

TOR 4: Prepare an EAC legal instrument to be used by Partner States in implementing overload control regulations. Such an instrument shall be either a Protocol or a regional Act, depending on which option would be most appropriate.

Each of the ToR is separately reported in each of the following chapters.

2 DEVELOPMENT OF A COMMON TRAINING CURRICULUM FOR WEIGHBRIDGE PERSONNEL

2.1 Background

Modern weighbridge operation has increased in complexity and it requires the staff to be properly trained in variety of disciplines which are required for the job. One of the objectives of the on-going exercise for harmonization of overload control in the EAC countries is that weighbridge staffs in the region have to be trained to the same professional standard using the same tools and modalities. The Interim Report by PADECO (2011) noted that there are over 50 weighbridges in the EAC countries, which implies that a sufficient number of appropriately trained weighbridge staff must be in place for a reasonable enforcement of overload control strategy in the region.

In some EAC countries in-house training of weighbridge staff is carried out. Depending on the status, awareness and infrastructure for overload control in each of the EAC country, the level and quality of training is different due to different emphasis, syllabuses, and the depth of teaching.

The ongoing process for harmonisation of overload control in EAC countries necessitates training of weighbridge staff in the EAC countries to be centralized and to be trained using same curriculum, course content, and depth of teaching to minimize inconsistencies in weighbridge operation in the region. Other advantages of centralized training include; confidence and mutual professional recognition of weighbridge staff in border weighbridges, and reducing training costs, as each country shall contribute on the establishment and running costs of the training facility.

Previous studies (Pinard, 2010; Gicon A/S and InfraAfrica, 2003) conducted for SADC region also identified the need for a common training in the region in order for overloading enforcement to perform optimally and to ensure that the applicable regulations are applied correctly. Furthermore, studies also observed that training in the SADC Region should be coordinated as far as possible in order to achieve uniformity in overload control policies and procedures despite the differences in axle and GVM regulations in the SADC Member States.

2.2 Objectives

This activity is part of the main task on Harmonisation of Weighbridge Standards and Regulations of the East African Trade and Transport Facilitation Project. The main objective is to develop a common training curriculum for training weighbridge staff in the EAC member states. The specific objectives are:

- To understand the training modalities of weighbridge staff in each EAC member state.
- To study the training manuals for weighbridge operation which are used in some EAC, SADC, and COMESA countries
- To follow-up on the recommendation by PADECO (2011) on the types of weighbridge facilities for EAC countries
- Harmonize the curriculum for EAC countries with recommended curriculum in SADC and COMESA studies

2.3 Methodology

The main activity in formulating training curriculum is through desk study. Other tasks include: Visits to weighbridge stations to acquire more information through observation and interviews; interviews

and discussions to different experts and stakeholders in the region, and analyzing the information gathered to assist in developing a common training curriculum.

2.3.1 Desk Study

Important documents which need to be reviewed in formulating the training curriculum are:

- Training manuals for weighbridge operation which exists in some EAC, SADC, and COMESA countries
- Training manuals for weighbridge operation in other countries in the World
- The final report by PADECO (2011) on the recommended types of weighbridge stations for EAC countries
- EAC countries laws and regulations relating to vehicle loading limits and dimensions
- Previous studies which have been conducted in SADC, COMESA on weighbridge management and staff training
- Weighbridge technology and overload control trends in the world
- Weighbridge training syllabus and modalities in other countries in the world

2.3.2 Visits, Interviews and Discussions

Structured interviews and formal discussions were conducted to collect opinions and information related to equipment, weighing procedures, professional and human-based deficiencies in the operations of weighbridges. Stakeholders that were interviewed include governing authorities (Ministries, Road Authorities), weighbridge stations, transporters, Freight Forwarders, Truck and Bus Owner's Associations, and Police Inspectors.

2.3.3 Collection of Views from Expert's and Task Force Meetings

The Expert's Meetings were held in all EAC countries between 4th July 2011 and 25th July 2011, and the Task Force Meeting was held in Dar es Salaam from 19th – 23rd September 2011. The following were suggested by the members during the Experts Meetings:

2.4 Existing Situation in EAC Member Countries

Among the EAC countries, only Kenya and Tanzania have Manuals for Weighbridge Operations. The manuals for both countries are almost similar in content and structure of presentation. The manuals are used for in-house training of staff and as a guide for operations and responsibilities of all staff in the station (Weighbridge staff and the police). The manuals give various explanations in simple terms on:

- The rules and regulations for the use of heavy vehicles on public roads
- An understanding of the weighbridge operations
- Technical features of equipment
- Procedures of supervision and maintenance of the various types of weighbridges.

The manual are also intended to enable the Weighbridge staff and the Police to pass information to drivers and owners of vehicles concerning the legally correct loading of passengers and goods on heavy-duty vehicles and their mass limits.

2.4.1 Tanzania

According to TANROADS, in-house training of weighbridge staff is a sub-activity in axle load control. Trainings are periodically conducted at weighbridge stations by a trainer from TANROADS headquarters. The purpose of training is to provide the weighbridge staff and hauliers with information about axle load policy and legislation. The syllabus for the training of the weighbridge staff has been composed to give an overall view of the approach required in weighbridge operations, and as a quick guide to data and information required for enforcement of overload.

In 2001, TANROADS in co-operation with the Norwegian Public Roads Administration published a manual for weighbridge operation with the purpose of giving the weighbridge staff the understanding of axle loads control activities and its importance. The intention of preparing the manual was to provide an understanding of the weighbridge operations and regulations in Tanzania and of the technical features together with procedures of supervision and maintenance of the various types of weighbridges.

The manual is based on a new and better legislation for overloading in Tanzania that came in operation on January 2001. The prime objective of the new amendment legislation was to facilitate a more efficient regulation of vehicle overloading in Tanzania in order to reduce accelerated destruction of the road infrastructure.

The new legislation includes amendments that were recommended by SATCC and agreed upon for implementation within the SADC region. The new amendments are to The Road Traffic no.30 of 1973 (maximum Weight of Vehicle (Amendment), which substitute certificates for cost damage or injuries to highways and bridges, (The Highways Ordinance Cap. 167 Section 46 and 47). Included is also the principle of fees for excess of the legal Gross Vehicle Mass (GVM). The structure and content of the manual is summarized in Table 1.

Table 1: Summary of structure and content of TANROADS weighbridge operation manual

Chapter	Topic	Coverage
1. Background and Scope of the Manual	Introduction	-Purpose of the manual -Scope -Intended users of the manual
	Objectives of Measuring Vehicle weights	-Road safety -Limiting wear/tear of the road -As an input to pavement and bridges design -As legal evidence for loading vehicle above regulations
	Meaning of Overloading	-Reasons for limiting loads -Different aspects of overloading with respect to axle configurations and GVM
2. The Role of Weighbridge Staff and the Police	Weighbridge Equipment Operators	-Weighing operations -Load calculations and issuing fees -Verifying vehicle dimensions -Detention of overloaded, defective and unsafe loaded vehicles -Supervision and care of equipment and surroundings -Preparation of reports (daily, weekly, monthly, etc,.) -Reporting of any irregularities to TANROADS

Chapter	Topic	Coverage
	The Police	-Enforcement of laws and regulations -Maintain law, order and security -Enforcing other technical specifications for vehicles
3. Rules Regulations and Procedures	Rules and Regulations	-Former legislation under Road Traffic Act No. 30 of 1973 -Current regulation; The Road Traffic (Maximum Weight of Vehicle) Regulation 2001
	Objectives	- Of revised legislation -Reasons (including SADC recommendations for harmonized standards)
4. Introduction of Administrative Progressive Fee System	The need for Sanction	-Need for effective surveillance -As realistic means of compensating damage to the road and bridges
	Prosecution Versus Administrative System	-Costly and ineffective tradition system of prosecuting offenders -Simple administrative system in the new legislation and prerequisites to be effective
	Enforcement and Operational Aspects of the New Legislation	-Categories after weighing (not overloaded, overloaded by axle or GVM, exceeds dimensions, awkward and abnormal load, etc) -Fees -Permits for abnormal and awkward loads -Weighing procedure and certificate -Fee schedules and payment procedure -Penalty for habitual offenders -Enforcement and statutory power -Administrative appeals -Court appeals
5. Tanzania Axle Load and GVM Limits	First Schedule: GVM limits	GVM limits for different descriptions of vehicles
	Second Schedule: Axle and Axle group limits	Load limits for different axle/group of axle configurations and number of tyres
	Third Schedule: Overloading Fees for Axle and Axle groups	Schedule of fees for axle/group of axle overloading in step of 100 kg above the limit up to 5000 kg
	Fourth Schedule: Overloading Fees for GVM	Schedule of fees for GVM overloading in step of 500 kg above the limit up to 16000 kg
6. Definitions, Configurations, and Dimensional Limits	Definitions	-Commercial vehicle -Passenger vehicle
	Dimensional Limits	-Length, width, and height for rigid articulate and vehicle combinations
	Axle Configurations	-Description of vehicle configurations and combination with corresponding GVM and axle load limit.
7. Weighbridge Report Forms (Certificate)		-Minimum GVM to pass through a weighbridge -Importance of issuing certificate -Information required to be entered in the certificate -When to issue new certificate and overload fee

Chapter	Topic	Coverage
		for vehicle passing multiple weighbridges
8. The Overload Charges	Background	-Basis for charging overloading -Why using charges from SATCC study -Tolerances and rounding off to 100 kg
	Calculation of Overload Charges	-Example on fee calculation for GVM overload -Example on fee calculation for Axles overload
	Unloading	-Reasons for unloading -Unloading charges
	Imposing and Collecting Overloading Charges	-Notification to the owner -Mode of payment
9. Reporting of Weighbridge Activities		-Importance of properly organised records and storage of data -Report summaries: what items should be included in daily, weekly, monthly, etc,. Summaries
10. Features of Weighbridges: Method and Equipment	Introduction	-Static and dynamic weighing -Requirements and features of static and dynamic weighbridges
	Weighbridges in use in Tanzania	-Existing performance of static weighbridges and platform sizes -Trend and reason for replacing old weighbridges
	Static Weighbridge Technology (in general and worldwide)	-Description of types of weighbridge scales (mechanical, electromechanical, hydraulic, analogue, digital, etc)
	Portable Axle load Scales (in general and worldwide)	-Types of portable scales -Limitations of portable scales
11. Quality Inspection Routines	Introduction	-Purpose of quality inspections -Staff from TANROADS headquarters visit weighbridge stations to inspect operational quality and environment surrounding the station
	Inspection Form	-Description of sections to be filled in the Inspection Form. Sections to be filled are: -General Information of weighbridge location and inventory of main equipment - Condition of Equipment (Scale, pit, computers, printers, radio, cars) -Weighbridge site and surroundings -Staff performance (including training status[1])

2.4.2 Kenya

The Kenya National Highways Authority (KeNHA) published the Weighbridge Operations Manual for training of weighbridge staff in 2010. The main purpose of the manual is for the weighbridge staff to familiarize themselves with weighbridge procedures and the laws and regulations governing overload control in Kenya roads for efficient weighbridge operations. The manual reminds on the role of weighbridge staff in providing consistent evidence in prosecution of overloading offences.

[1] According to TANROADS, there is frequent replacement of corrupt staff with new untrained staff at weighbridge stations.

The manual issues guidelines based on the Traffic Act Cap (403), which prescribed vehicles weight and dimensions limits, and provide an understanding of operations, procedures and the technical features for efficient use and maintenance of the various types of weighbridges. Table 2 summarizes the structure and content in the manual.

Table 2: Summary of structure and content of KeNHA weighbridge operation manual

Chapter	Sub-topic	Coverage
INTRODUCTION	-	-Purpose of the manual
1. RATIONALE FOR AXLE LOAD	Design of Pavements	-The basis of pavement design and the 4.5 damaging factor -Cumulative Equivalent Standard Axles (CESAs) and traffic classes
	Pavement Damage from Overloading	-Elaboration of damaging factor of 4.5 vs percentage of overload
	When is a Vehicle Overloaded	-Definition of overloading by axles and by GVM
2. PRESCRIBED VEHICLE WEIGHT LIMITS	Maximum Axle Load Limits	-Details of the weight limits by type of axle configurations -Limit for axles with single tyres
	Maximum Gross Vehicle Weights	-Details of weight limits by axle and vehicle configurations
	Maximum Vehicle Dimensions	-Maximum width and height -Maximum length for rigid, articulate, and combination vehicles
	Allowable Maximum Axle Load	-Tolerance for non-steering axles
3. SANCTIONS FOR OVERLOAD OFFENCES	Fines for Overloading	-Schedule of minimum fines for first offenders and subsequent convictions vs degree of exceeding the axle and GVM limits
4. ENFORCEMENT OF VEHICLE WEIGHTS	Role of Weighbridge Stations	-Stakeholders responsible for overloading -Elaboration of main function of weighbridge stations
	Weighing Procedures/Rules	-Details of which vehicles are supposed to be weighed -Procedure for vehicles which cannot be weighed -Procedures following an overload case -Work rules for weighbridge staff
	Unloading of Overloaded Vehicles	-Unloading before proceeding
	Vehicle Exemption Permit	-Procedure for abnormal cargo (weight and dimensions)
	Weighing Records	-List of records that have to be maintained at the weighbridge station
5. WEIGHBRIDGES ON NATIONAL ROADS	Register of Weighbridges on National Roads (July 2010)	-Name/road of all weighbridges in Kenya
	Maintenance of Weighbridge	-Emphasis on maintaining

Chapter	Sub-topic	Coverage
	Equipment	equipment and record keeping
	Current Methods of Weighbridge Technology	-A summary of weighbridge technologies and methods in the world
	Inspection of Weighbridges	-Frequency and who should conduct inspections
	Weighbridge Inspection Report	-Objectives of the report -Description of the form -Sample form
6. WEIGHBRIDGE STAFF	Organisation Structure for KeNHA and a Weighbridge Station	-Org. structure of KeNHA and position of weighbridge station manager -Org. structure of weighbridge station
	Qualifications for Weighbridge staff	-Description of qualifications of Officer in charge and machine attendants -Role of the police
7. APPENDICES	APPENDIX 1	Extracts of regulations that govern axle load control in Kenya in: -The Traffic Act (Cap. 403) and its subsidiary legislations. -The Weights and Measures Act (Cap. 513) and its subsidiary legislation -The Kenya Roads Act (2007
	APPENDIX 2	-Sample of weighbridge documents (weighbridge ticket, prohibition order, compliance certificate, exemption permit, daily returns, monthly returns)

2.4.3 Burundi, Rwanda and Uganda

Overload control programs have not yet started in Burundi and Rwanda. In Uganda[2] there are no training programs for weighbridge staff and do not have manuals for weighbridge operations.

2.4.4 Concluding Remarks on EAC Countries Status

Manuals for Weighbridge operations from Kenya and Tanzania reveals more similarities than differences in the content and their presentation on the various aspects of information required for ***traditional type*** of weighbridge operation which are common in the two countries. Manual from KeNHA also summarizes at the Appendix the Traffic Act (CAP403), the Weight and Measures Act (CAP. 513), and the Kenya Road Act, 2007 by including all the sections in the Act that relates to vehicle overload control.

Differences in the arrangement of contents and chapters between the two manuals were also observed. However, since the manuals were intended for use as operational guide and reference material to the weighbridge staff, drivers and truck owners, and not as a training document, then the

[2] *Eng. D. Sabiiti. Assistant Commissioner. Ministry of Transport and Works.*

flow and arrangement of chapters is not relevant as long as important information for routine operation and enforcement of overload control is included.

Recommendation 1:
The weighbridge operation manuals from TANROADS and KeNHA are a good starting point in the formulation of training curriculum for EAC member states as they include most aspects of the information required in the operation of traditional weighbridge station.

2.5 Status in SADC and COMESA Regions

2.5.1 Background

Limited success at regional level in the implementation of the SADC/COMESA proposals on vehicle overload control and the trend on increasing investment in the region prompted Sub-Saharan Africa Transport Policy Program (SSATP) to initiate projects to study vehicle overload control in the region. The study was based on a survey of Regional Economic Communities (COMESA, EAC, SADC), international bodies (UNECA, USAID, World Bank), private sector associations (FESARTA), and country experts. The study[3] observed lack of adequate training and variation on the type and standard of training in Eastern and Southern Africa countries which affects the quality and competence of weighbridge staff and the consequent inefficiency and ineffective operation of weighbridges. Furthermore, it recommends on upgrading the quality of weighbridge infrastructure and operations in the member states.

Prior to the study initiated by SSATP, SADC Memorandum of Vehicle Loading (SADC, 1999) provided guidance on training requirements in the SADC region. The MoU called for a high standard of professionalism amongst authorized officers, operators, drivers, consignors and consignees. The member states who signed the MoU also agreed on the following:

- Encourage programs aimed at promoting a common understanding of: Regulation and enforcement of vehicle loading; The manner in which any goods may be loaded and carried on a vehicle, including driving practices; and weighing practices and procedures.
- Share existing training facilities and investigate the feasibility of establishing a regional training centre;
- Harmonize training programs bearing in mind the need to ensure adequate levels of expertise and professionalism;
- Coordinate human resource development policies and programs through a regional plan for the transfer of knowledge, skills and technology;
- Provide for the mutual recognition of qualifications; and
- Encourage practical on-the-job joint training.

Most of the recommendations on training of weighbridge personnel in the study on Guidelines on Vehicle Overload Control in Eastern and Southern Africa4, have emphasized and are in line with the SADC Memorandum of Vehicle Loading, with an addition that the weighbridge personnel should also be able to check the technical condition of the vehicles. The study also observed increase in complexity of management, operation and maintenance of modern weighbridge technologies and

[3] Overload Control Practices in Eastern and Southern Africa: Main Lessons Learned. Michael Ian Pinard. April 2010
[4] Guidelines on Vehicle Overload Control in Eastern and Southern Africa. Michael Ian Pinard, (2010)

further recommends that weighbridges should be operated by properly trained personnel who have collective range of skills of managerial, supervisory, technical, legal and mechanical nature. The study provided a general guidance on various aspects of training for overload control personnel which can be customized to suite each SADC country.

2.5.2 Proposed Scope of Training Program for East and Southern African Countries

The study grouped the range of skills needed for efficient and effective management of modern weighbridges as follow:

- Transport environment
- Data management
- Legislation and regulations
- Weighbridge equipment
- Weighing operations
- Software operation
- Management reporting
- Staff management
- Operations management
- Maintenance management
- Safety

Due to the multi-displinary requirements on the suggested training, the study suggested categorization of weighbridge staff according to the above skills. However, in doing so it cautioned that in small weighbridge stations with few personnel staff may be required to perform all functions in the office. The categories suggested are as follows:

- Law enforcement staff
- Operational staff
- Administrative staff
- Maintenance staff
- Management

2.5.3 Proposed Training Syllabus for Eastern and Southern Africa

The study on Guidelines on Overload Control in Eastern and Southern Africa proposed a training syllabus based on the above observations. The training proposed relates to specific practices in overload control as well as general training relating to the aspect of overload control. The study also proposed that after theoretical training the participants should attend practical training in operating weighbridge facilities. At the end of training the participants be certified and accredited as competent to undertake overload control in weighbridge facilities. The proposed theoretical training is divided into eight modules, each showing the targeted personnel and duration of teaching as shown in Table 3.

Table 3: Proposed training syllabus for weighbridge operation staff for Eastern and Southern Africa

Course Title and Duration	Target Audience and Course Objective	Content
1. Transport Environment (1 day)	***Audience:*** All Staff ***Objectives:*** -Basic understanding of the transport environment -Why Overloading?	-Introduction -Importance of transport sector and road network -Basic principles of road design -What is overloading -Effects of overloaded vehicles -Why transporters overload
2. Legal Basis and Environment (5 days)	***Audience:*** Law enforcement and operational Staff ***Objectives:*** -Knowledge of acts, regulations, terminologies and definitions -Understand and know how to apply various clauses and regulations and how they fit together	-Terminologies and regulations relating to overload -Power of the police -Prosecution vs administrative system -Prosecution of road traffic cases -How court functions, giving evidence in court, criminal/civil cases, and arrest procedures -handling of properties of accused -Applicable presumptions and their implications -Application of the tolerance margins
3. Weighing Operations (2 days)	***Audience:*** Law enforcement and operational Staff ***Objectives:*** -Knowledge of all steps in overload control process -To ensure uniformity in the operations	-Screening of vehicles (aim, types, using devices, visual) -Weighing procedure (axle, axle unit, and GVM) -Calculations of overloads (forms, readouts, max dimensions, axle loads, GVM, combination mass, overload fee structure and bridge formula) -Releasing of legally loaded vehicle -Dealing with overloaded vehicle (charging, load adjustment, arrest of driver and seizure of vehicle for severe overloads) -Dealing with moving loads (liquids, animals) -Dealing with special loads (sealed containers, perishables, hazardous) -Dealing with abnormal loads (Dimension wise, mass wise, permits, weighing procedure)
4. Software Operations (3 days)	***Audience:*** Law enforcement, operational and administrative Staff ***Objectives:*** -Knowledge of weighing software -Maintenance of weighing software	-Basic computer skills and operating systems -Understanding weighing software -Capturing vehicle data -Capturing scale readings -Processing data and interpretation -Printouts -Maintenance of software and updating pick-list for data recording -running of reports -Extraction of data
5. Weighbridge equipment (2 days)	***Audience:*** Law enforcement and operational Staff ***Objectives:*** -Knowledge on the correct use, testing and maintaining of all	-Types of weighbridge and their use (fixed, mobile, static, dynamic, axle, axle unit, and multi-deck) -Maintenance and calibration requirements (applicable standards, verification checks and

Course Title and Duration	Target Audience and Course Objective	Content
	equipment in the facility	requirements, maintenance, type approval requirements, cleaning, and operators certificate) -Portable enforcement weighing/screening equipment (types, limitations, site selection, setting-up, verification, weighing procedures, maintenance)
6. Data Management and Reporting (5 days)	***Audience:*** Administrative Staff, Management ***Objectives:*** -Knowledge in data management and producing reports	-Introduction to databases -Data collection, preservation, and backing-up -Data verification (identification and treatment of invalid data) -Data analysis and reporting -Types of reports (operational, manual, daily, weekly, monthly, annual) -Producing reports -Interpretation of reports -Types and interpretation of graphs -Producing ad-hoc reports
7. Generic Training (2 days)	***Audience:*** All Staff ***Objectives:*** -General knowledge on the management and operation of a weighbridge facility	-Basic computer skills -General computer office applications -Staff and operations management -Financial management -Information plates, signs, and safety marks that should be displayed and their interpretation -Dealing with hazardous cargo -Fire fighting -First aid
8. Health and Safety Issues (1 day)	***Audience:*** Law enforcement and Operational Staff ***Objectives:*** -To sensitize staff on health and safety issues related to various aspects of transport	-Categories of hazardous loads and their risks -Livestock -Abnormal loads by weight, and dimensions

Recommendation 2:
Practical training should be included in the proposed training curriculum and it should be taken after the theoretical part of the training is completed. The practical training should be conducted at Categories A or B Traffic Management Centers (weighbridge stations).

Recommendation 3:
Due to the multi-displinary nature of the weighbridge stations, the staff should be categorized and trainees should attend modules which are only relevant to their profession and position at the weighbridge station.

2.6 Observations from the PADECO Study

Part of this study is to incorporate the recommendations from PADECO study on the equipment and technology to be used in the weighbridge facilities in the EAC region. The study recommended that

there should be standardized categories of Traffic Management Centres (TMC) in EAC region. The proposed TMC categories are:

- **Category A: Full Traffic Control Centre (FTCC)**, with weighing facilities on both sides of the road for large volume of heavy traffic. FTCC should have the following:
  - a high-speed weigh-in-motion (HSWIM) screening device in the main traffic lane,
  - a low-speed weigh-in-motion (LSWIM) screening device to confirm vehicles suspected to be overloaded as indicated by the HSWIM,
  - a static platform scale for accurately weighing the vehicle axles/axle units and GVM.
- **Category B: Type 1 Traffic Control Centre (TCC 1),** which is essentially the same as a FTCC except that it operates on only one side of the road.
- **Category C: Type 2 Traffic Control Centre (TCC 2)**, has fewer control facilities than either FTCC or TCC 1 in that it does not have in-lane traffic screening but requires all heavy vehicles to leave the main carriageway and cross over low speed weigh-in-motion (LS-WIM) equipment.
- **Category D - Lay-by Control Centre (LCC)**, which consists essentially of a road lay-by at which either a static or mobile weighbridge is installed. LCC may be operated in conjunction with a HSWIM as a screening device.

Other recommendations from the PADECO report which gives guidance to the curriculum development for EAC countries are:

- Gradual phasing out of single axle scales in favour of either axle unit or multi-deck scales in TCC facilities.
- More extensive use of WIMS, in conjunction with static weighbridges, to reduce traffic.
- An audit of existing weighbridge infrastructure in terms of weighbridge type (single axle, axle unit, multi-deck), computerization, staff and driver facilities, parking-off areas, etc. in order to determine the required upgrading and estimated cost implications.
- A weighing tolerance of 5% on both axles and GCM should be adopted on a regional basis.
- Development of harmonized accreditation standards for weighbridges and develop regional database of accredited weighing stations.

Recommendation 4:
Functioning of different categories of Traffic Management Centers (TMC) to be included in the training syllabus despite the fact that they have yet to be implemented in all EAC countries at the present time.

2.7 Consideration of Views from Expert's and Task Force Meetings

The draft curriculum for training of weighbridge staff were presented and discussed at Expert's Meetings which were held in all EAC countries between 4th July and 25th July 2011, and the Task Force Meeting which was held in Dar es Salaam from 19th – 23rd September 2011. During the discussions many issues were discussed and clarified.

The following were recommended to be included in the training syllabus:

- **Work ethics and professionalism**: This was raised by transporters due to the high level of corruption of weighbridge staff.

- **Units and unit's conversion**: Weighbridge manufacturers make options for their equipment to be used in both SI units and other unit systems that are used in the world. It is therefore important for the weighbridge staff to understand other unit systems and conversion of units from one system to another
- **Environment awareness**: Trucks carry a variety of cargo, including dangerous cargo which can pollute land and water sources. It is therefore important for weighbridge staff to have knowledge of environment pollution which shall enable weighbridge staff to give advice to transporters of cargo which are dangerous to the environment when there is spillage.
- **Background to the EAC, SADC, and COMESA**: Weighbridge staff should be aware of the impact of his work to EAC partner states, SADC, and COMESA region economic communities.

The following were recommended **not to be included** in the training syllabus:

- **HIV/AIDS awareness:** Not to be included in the training because HIV/AIDS awareness campaigns are conducted everywhere including working places.
- **Basic computer skills** should not be a pre-requisite for attending the training because weighbridge software is user friendly and simple to use and does not need basic computer skills. and new operators normally need few hours of on-the-job familiarization to know how to use it. Hence by the time the staff attend the training he/she would already know how to use the software.
- **Software Operation and Management:** This module is not appropriate to be taught to machine operators because weighbridge software is very user friendly and does not need training. New operators normally need few hours of on-the-job familiarization to know how to use it. Hence by the time the staff attends the training he/she would already know how to use the software. Furthermore, data processing and management, and reports preparation is the job of top management and not machine operators.

Recommendation 5:
The following should be included in the training syllabus: Work ethics and professionalism; Units and unit's conversion; Environment awareness; and Background to the EAC, SADC, and COMESA regional economic communities.

2.8 Recommended Training Curriculum for the EAC Member States

The recommended curriculum for training of weighbridge staff in EAC countries has been largely based on:

- Manuals for Weighbridge Operation used in Tanzania and Kenya
- The Training Syllabus proposed in the study by SSATP for SADC countries
- Recommendations from PADECO (2011) study
- Views from Countries Expert's and Task Force Meetings

Manuals for Weighbridge operation from Kenya and Tanzania cover all aspects of effective operation of ***traditional type*** of weighbridge which are common in the two countries. Manual from KeNHA also summarizes at the Appendix the Traffic Act (CAP403), the Weight and Measures Act (CAP. 513), and the Kenya Road Act, 2007 by including all the sections in the Act that relates to vehicle overload control.

The Training Syllabus proposed in the study by SSATP for SADC countries is a result of comprehensive studies on understanding the reasons behind limited success in overload control in the region. The study covers modern weighbridge facilities and highlighted general guidance on various aspects of training for overload control personnel in the SADC region which shall make the overload control and enforcement processes to be harmonized, and performed in consistent manner and at high standards.

2.8.1 Aim and Outcome of the Training

The main objective of the training is to ensure that weighbridge operations are carried out efficiently and at high standard and in consistent manner throughout the region. The training will be tailored to prepare weighbridge staff to perform their duties by providing knowledge and skills to:

- Understand the importance of overload control and adhere to the legislative requirements
- Understand the legal obligations and duties of an operator
- Understand basic terms associated with the operation of a weighbridge
- Make accurate measurements
- Understand the working principle of the equipment and how the accuracy of the measurement may be affected
- Complete measurement tickets, associated documentation and charge consistent fees and penalties to offenders.

2.8.2 Design and Scope of Training

The approach to the scope of training of weighbridge personnel and its organization is based on the following:

- Manuals for weighbridge operations for Kenya and Tanzania
- Proposed syllabus for training of weighbridge staff for Eastern and Southern Africa
- Interviews from stakeholders
- Expert's inputs from EAC member states
- Stakeholder's inputs from EAC member states

The approach by SATTC study on the categorization of staff in the weighbridge station is adopted in this study where, some staff needs to be trained in all disciplines, whereas others can only be trained in disciplines which are more related to their positions. Furthermore, training will consist of both theoretical and practical part. The later will take place after the theoretical part has been completed. Knowledge which will be covered in theoretical part includes:

- Background to Region Economic Communities (REC), transport corridors, transport environment, and rationale for overload control
- Legislation and regulations relating to overload control.
- Role and power of traffic police in overload control.
- Vehicle Combination, Axle configurations and Dimension limits
- Types of Traffic Management Centres
- Screening of vehicles and structured procedure for overload control
- Training in basics and type of weighbridge equipment
- Units and units conversion
- Operation of weighbridge equipment
- Introduction to weighbridge software
- Filling and issuance of certificates to non offenders

- Application of fees to offenders and administration of overloaded vehicles and tolerance margins
- Training relating to the court process.
- Environment pollution, and effects of spillage from cargo which can pollute the environment
- Training on how to deal with dangerous, moving, and abnormal loads and required permits
- Workplace safety and how to deal with different types of emergencies
- Customer service, work ethics and professionalism

2.8.3 Recommended Training Syllabus

The proposed training is divided into nine modules which are arranged as follows:

Module 1: Background to REC, Transport corridors in REC, Road Transport, and Overloading Control
Module 2: Legislations and Regulations on Overload Control
Module 3: Vehicles Dimensions, Combination, and Axle configurations
Module 4: Traffic Management Centers and Weighbridge Equipment
Module 5: Screening and Weighing Operations
Module 6: Administrative Procedures and Prosecutions
Module 7: Introduction to types of weighbridge software
Module 8: Environment pollution, workplace safety, customer service, work ethics and Professionalism
Module 9: Practical Training

Table 4 shows the proposed topics and goals to be achieved in each module in the proposed training for weighbridge staff in the EAC member states. The syllabus for each module is attached as Appendix 1.

Table 4: Objectives and goals for each module

Module	Topics	Goals/Objectives
1 Background to Road Transport and Overloading Control	1.1 Introduction to Road Transportation 1.2 Meaning and Types of Overloading 1.3 Effects of Overloading to Safety and Damage to the Infrastructure 1.4 Controlling Overload 1.5 Reasons for Measuring Vehicles Weight	To understand: • Importance of road transport to the economy of the country • Different types of overloading and their effects to the road infrastructure and safety • Importance of controlling overloading • Other reasons for measuring vehicle weights
2 Legislations and Regulations on Overload Control	2.1 Legal terminologies and definitions 2.2 Road Traffic and Transport Acts and regulations on Overload Control 2.3 Weights and Measures Act 2.4 Role of the Police	To understand: • Terminologies and regulations relating to overload • How to apply various clauses and regulations and how they fit together • Procedure for law enforcement • Importance of adhering to the legislative

Module	Topics	Goals/Objectives
		requirements
3 Vehicles Combination, Dimensions, and Axle Configurations	3.1 Different Types of Vehicles Combinations and Axle Configurations 3.2 Vehicles Dimension Limits 3.4 Reasons for Restricting vehicle Standards 3.5 Standards and Regulations in EAC states	To understand: • Different vehicle combinations and axle configuration and their effects on infrastructure overloading • Regulations which restricts certain types of vehicles, combination of vehicles, and dimensional limits
4 Weighbridge Equipment and Traffic Management Centers	4.1 Types of Weighbridge Equipment 4.2 Types of Traffic Management Centers (TMC)	To Understand: • Different types of weighbridge technologies and their working principles • Basic terms associated with the operation of a weighbridge • Advantages, and disadvantages of each weighbridge technology • Types of TMC and appropriate location for each type of TMC
5 Screening and Weighing Operations	5.1 Vehicles Screening 5.2 Weighing Procedure 5.3 Procedure for Releasing Legally Loaded Vehicle 5.3 Procedure for Overloaded Vehicle 5.4 Procedure for Special and Abnormal Loads 5.5 Procedure to Unload Cargo	To understand: • How to screen vehicles and methods of screening • Reasons for screening vehicles • Weighing procedure for vehicles and how to deal with overloaded vehicle • How to make accurate measurements • How the accuracy of the measurement may be affected • How to inspect vehicles for compliance with other vehicle regulations
6 Administrative Procedures and Court Prosecutions	6.1 Administrative System 6.2 Procedures for Prosecution in the Court	To understand: • Fee schedule for overloaded vehicles and payment procedure • How to complete measurement tickets, associated documentation and charge consistent fees and penalties to offenders. • How to apply penalties for habitual offenders • The procedures and how to give evidence in court • How to handle administrative and court appeals
7 Introduction to Types of Weighbridge Software	7.1 Structure of Weighbridge Software 7.2 Access levels	To understand: • Structure of software and interface for weighbridges • How to maintain software

Module	Topics	Goals/Objectives
		• Access levels
8 Environment pollution, Workplace Safety, work ethics and Professionalism	8.1 Environment Pollutants from Vehicles 8.2 Cargos that are Hazardous and Dangerous to the Environment 8.3 Types of Fires and Fire Extinguishers 8.4 First Aid Procedures 8.5 Occupational Health and Safety Practices 8.6 Work Ethics and Professionalism	• To create awareness and understand the contribution of vehicles to environment pollution, and to understand types of cargo that are dangerous to the environment when spilled • How to deal with different types of substance spillage, fire hazards, and first aid procedures • To be aware of workplace hazards, safety and welfare as an employee of weighbridge station • To know how to treat drivers and transporters in a professional manners as customers • To understand the effects of corruption practices • Understand the legal obligations and duties of an operator

2.8.4 Prerequisites for Attending Training

The training is designed for weighbridge staff in EAC countries. Participants to the training must be employees of the Road Authorities from respective EAC countries who are directly dealing with overload control. Hence, each country has to ensure that it employs appropriate personnel for the various positions in the weighbridge station and other staff who are dealing with overload control. For the case/countries where weighbridge operations are privatised, the government authority has to ensure that weighbridge operators have appropriate qualifications and that they must attend the proposed course whose main objectives are to harmonise weighbridge operations in the region and to be performed in consistent manner and standards.

In addition to that, participants to the training must possess at least the following:

- Certificate in Advanced Level Secondary School (form six) or diploma in relevant field
- Should be able to communicate (speak, write, and read) in English.

2.8.5 Evaluation of Participants

The knowledge and skills attained by the participants will be evaluated by:

- Assignments (20%)
- Tests (20%)
- Practical Training (20%)
- Final examination (40%)

Participants will be required to write a Practical Training report which shall be evaluated for final grading. The report shall be in the form of assignment, e.g., on how to improve a certain aspect of the screening, weighing or administrative operation. The overall performance of the participants will

be graded and successful candidates who are in the position of operators will be given certificates as *Qualified Weighbridge Operator*.

2.8.6 Locations for Training and Accreditation

The selection for the locations within EAC countries to host training will depend on:

- The locations to be **near Category A or B Traffic Management Center:** This will provide full range of Traffic Management and overload control equipment for the participants to train and experience during Practical Training.
- **Logistics:** The training locations should be easier to be reached by participants from all EAC countries.

The training facilities must have a high quality standard and should be accredited by the appropriate education body of the hosting countries. This will also ensure that certified participants are recognized weighbridge operators and are competent and can work in any weighbridge facility in the world.

2.8.7 Training Duration

The total duration of training should be 4 weeks. The recommended syllabus for theoretical training of the modules shall take 14 training days (3 weeks), and practical training is recommended to be conducted for 4 days. Two (2) days are reserved for continuous assessment tests and the final examination which will be conducted after the Practical Training. Participants will be required to write a report on the daily activities conducted during the practical training.

2.8.8 Syllabus for the Training

The syllabus for each module indicating number of days and the category of staff that are compulsory to be trained is attached at Appendix 1.

2.8.9 Resources for Training

Documents and references materials to be used for the course include:

- Road Traffic Acts
- Weight and Measures Acts
- Specification and Instruction manuals for both mechanical and electromechanical weighbridge equipment (from manufacturers)
- Weighbridge Management Software
- Weighbridge station operating procedures and policies
- Weighbridge Operations Manuals
- Standards for Manual Handling and the Industry Safety Code
- Occupational Health and Safety (OHS)
- Quality assurance procedures
- First Aid and Emergency Procedures
- Material Handling and Safety
- Codes for classification of dangerous Cargo

2.9 Further Recommendations

Recommendation 6

There should be a common Weighbridge Operation Manual which should be used in all EAC countries

Recommendation 7

At the beginning of its operation, the Training Facility should conduct training after every 2 months to clear the backlog of untrained staff. This will also enable the management to plan training for their staff comfortably without facing shortage of staff at the station. Priority should be given to weighbridge equipment operators.

Recommendation 8

There should be refresher training courses for each staff after every two years. This is important to enable staff to catch up with new technologies, network with colleagues from partner states and learn new tricks from transporters to overload.

3 UNIFORM WEIGHBRIDGE PRINTOUT CERTIFICATE AND OVERLOAD REPORTING FORMATS

3.1 Objectives and Methodology

The objective is to set up uniform weighbridge printout (clearance) certificate and overload reporting formats across EAC region.

The methodology for this ToR included:

- Review of overload reporting formats and printout certificates across EAC region
- Review of overload reporting formats and printout certificates in ESA and across the world
- Collection of stakeholders and experts views

InfraAfrica[5] has carried out an extensive study on weighbridges, data collection and reporting in preparation for harmonisation among the RECs in eastern and southern Africa (ESA). Since their findings have been endorsed by the RECs of SADC, COMESA and EAC, they are widely used in this report to provide a review of the state-of-the-art and practice in ESA.

3.2 Purpose of Collecting Overload Control Data

The main purpose of collecting and analysing overload control data is to improve the effectiveness of the operations. Overload data may be useful in the following cases:

- Overloading patterns in terms of the different mass regulations (axles, axle units, vehicle and combination masses) can be assessed.
- The impact of new regulations or policies on the heavy vehicle transport industry can be assessed.
- Analysis of weighing data per operator can be used to identify transport operators that have a policy of deliberate overloading as well as operators that control their vehicle loading. This information can be used to focus law enforcement activities on “frequent offenders”.
- Analysis of weigh data per commodity type can assist law enforcement to focus on problem commodities and target particular origins of these commodities e.g. certain mines, quarries, etc.

It is therefore important that the data that is collected takes into consideration the above.

3.3 Overload Control Data Collection

Data collection is usually straightforward for computerised weighbridges, which are currently the state-of-the-art. Data summary is best presented both in the form of tables (so that actual figures can be viewed) and graphs (to illustrate long-term trends or dramatic changes in performance).

Various off-the-shelf weighing software packages are available from weighbridge suppliers and other vendors for capturing data from weighbridges. Weighing software need to be properly customised to meet the needs of the road authority, particularly in terms of the heavy vehicle mass regulations.

[5] InfraAfrica. Preparation of Synthesis Report and Guidelines on Overload Control; Regional Guidelines and Specifications on Aspects of Overload Control, World Bank Sub-Saharan Africa Transport Policy Program, May 2008

During the process of static vehicle weighing for law enforcement purposes, certain data is collected for record and analysis purposes. InfraAfrica[6] had identified the minimum data that should be recorded as follows:

- Sequence number
- Date and time of weighing
- Vehicle registration number(s)
- Truck/truck tractor make
- Name of operator
- Axle configuration
- Permissible axle/axle unit masses
- Actual axle/axle unit masses
- Commodity transported

In cases where the vehicle is found to be overloaded, the following data should also be captured:

- Origin
- Destination
- Road/route number where the vehicle was stopped
- Charging officer (if the vehicle is overloaded and charged)

In cases where the number of vehicles weighed per hour is relatively low, and time permits, the above additional data can be captured for all vehicles weighed (legal and overloaded). The origin/destination data of all vehicles weighed could be useful for O-D analyses.

Recommendation

While the collection and recording of a lot of weighing information has been blamed for the delay and long queues at weighbridges, it has to be noted that if certain data is not collected the long term trend and performance cannot be observed. It is therefore very important that a balance is found and for this reason it is recommended that the following data in Table 5 be collected at weighbridges for record and analysis purposes.

[6] InfraAfrica. Preparation of Synthesis Report and Guidelines on Overload Control; Regional Guidelines and Specifications on Aspects of Overload Control, World Bank Sub-Saharan Africa Transport Policy Program, May 2008

Table 5: Recommended data to be collected at weighbridges

S/N	Information	Mode of Capture/ Entry	Remark
1.	Sequence number	Automatic	
2.	Date and time of weighing	Automatic	
3.	Weighbridge station	Fixed	
4.	Region/province and country	Fixed	
5.	Vehicle registration number(s)	Manual	Vehicle and trailers
6.	Owners company name and address	Manual	Once entered, should automatically appear each time the veh. reg. no. is entered*
7.	Permit number	Manual	For abnormal loads
8.	Origin	Manual	Pull-down menu. Once entered, should automatically appear each time the veh. reg. no. is entered*
9.	Destination	Manual	-ditto-
10.	Vehicle axle configuration	Manual	-ditto-
11.	Permissible axle/axle unit masses/GVM	Automatic	Follows vehicle axle configuration
12.	Actual axle/axle unit masses/GVM	Automatic	Picked directly from weighbridge scales
13.	Commodity transported	Manual	Pull-down menu. Once entered, should automatically appear each time the veh. reg. no. is entered*
14.	Off loading (Yes/No)	Manual	Pull-down menu. “No” to appear as default value
15.	Action take (allowed to proceed, charged for overload, detained, etc)	Manual	Pull-down menu. “Allowed to proceed” to appear as default value
16.	Name of scale operator	Manual	Once entered, should automatically appear until it is changed or operator logs off*
17.	Signature	Manual	Operator’s signature
18.	Remark	Manual	If any

* It should always be possible to override the automatic text/information

The only data that has to be entered each time a truck is weighed is the vehicle registration number which will take 5-10 sec. Vehicle owner, address, origin, destination, type of commodity and axle configuration will only be entered once and will automatically appear each time the vehicle registration number is entered; although the default information can be changed if needed. If these were to be subsequently changed, the whole process will not take more than 1 min.

3.4 Data Verification

Data verification, which is very important for quality data, should as far as possible occur during the data capture (vehicle weighing) process at the weighbridge. Adequate data verification during the weighing process significantly simplifies the task of data verification at the data analysis stage.

Recommendation

- *The computer software should incorporate checks for invalid data as well as warnings for unrealistic ones (e.g. very high percentage of overloads)*
- *Pick lists (drop down menus) should be used to ensure uniform spelling of various data items such as axle configuration, action taken, commodity, origin, destination and region.*

3.5 Review of Overload Reporting Formats (incl. printout certificates) across EAC Region

3.5.1 Overload reporting format in Tanzania

Overload reporting in Tanzania is prescribed in the Manual for Weighbridge Operations[7]. The Road Traffic Act and regulations require all vehicles with a capacity weight above 3,500 kgs to be weighed at all weighbridges. For these categories of vehicles, a weighbridge report form should be issued.

When a vehicle is travelling from A to B, it may pass more than one weighbridge station on the road. In such a case, the procedure is that a weighbridge report form issued at the first weighbridge station should be countersigned at all other weighbridge stations on the route of that particular trip from A to B. If a driver is found to have altered the weight of his vehicle between two weighbridges, a new weighbridge report form should be issued and new overload charge should be imposed to the vehicle.

The weighbridge report form is important from several points of view. It is used as the basis for calculation of overload charges as well as for statistical purposes. The weighbridge report forms for use in Tanzania are issued in a book of 50 triplicate copies. The white original is given to the revenue officer, while the first copy (yellow) is given to the driver. A second copy (pink) remains at the weighbridge station and is used for later reference. Two sheets of carbon copy paper are required to produce the copies and a blue or black ballpoint pen is recommended for writing the forms. The items, required to be entered in the report are as listed below:

Region:	This is the region where the weighbridge is located
Date:	This is the date when the weighing is done
Time:	This relates to the time of day (use 24 hour clock)
Weighbridge station:	The name of the weighbridge station
Company name:	The name of the owner of vehicle in question
Company address:	The address of the owner
Vehicle model:	Make of the vehicle
Vehicle configuration:	Axle configuration of the vehicle (refer to annex)
Registration No:	Vehicle registration number, horsepower, semi trailer and trailer
Main-Load Measured:	Main load dimensions as measured at weighbridge station
Where loaded:	Point of origin
Delivery to:	Point of destination (delivery)
Vehicle dimensions:	Length, width and height to see if they comply with legal limits
Type of suspension:	Air or mechanical springs
Off loading Yes/No:	Gives indications of vehicle being offloaded or not
Action taken:	Action taken for particular vehicle (allowed to proceed, charged for

[7] TANROADS. Manual for Weighbridge Operations. Final version, May 2001.

	overload, detained, without permit etc.)
Name of enumerator:	Name of officer operating the weighbridge or in charge of operation at that particular time
Name of police officer:	Name of the police officer at the weighbridge enforcing the law and maintaining security
Name of driver:	Driver responsible for the vehicle at the time of weighing.
Remarks:	Remarks concerning any action taken or any other information necessary to be recorded without any particular entry in the form.

The standard weighbridge report form in Tanzania is the TFN808 Form shown in Figure 1.

TFN 808

A No. 5159501

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF INFRASTRUCTURE DEVELOPMENT

WEIGHBRIDGE REPORT FORM

Weighbridge Station:				Region		Date		Time (hrs)
Owner of Vehicle/Horse:								
Address of Owner of Vehicle/Horse:								
Type of Cargo:				Origin		Destination		
Transport Permit No.								
Vehicle Registration No:				Vehicle Dimensions				
Vehicle/Horse				Length (m)			Allowed (m)	
Semi trailer				Width (m)			Allowed (m)	
Trailer				Height (m)			Allowed (m)	
Axle Configuration								
Axle No.	Axle Type*	Load measured (Scale Reading) (Kg) (a)	Allowed Load (Kg) (b)	Discretion Allowance (Kg) ≤ 5% of (b) (c)	Adjusted Load (Kg) (a - c) (d)	Overload (Kg) (d - b) (e)	Overload Fee (US$/Tshs.) (From e)	Surcharge Fee (US$/Tshs.) (From c)
1	1 / 2 / 3							
2	1 / 2 / 3							
3	1 / 2 / 3							
4	1 / 2 / 3							
5	1 / 2 / 3							
6	1 / 2 / 3							
7	1 / 2 / 3							
8	1 / 2 / 3							
9	1 / 2 / 3							
10	1 / 2 / 3							
11	1 / 2 / 3							
12	1 / 2 / 3							
Sum of Axles - Fees (US$/TShs.)								
Gross Vehicle Mass								
Amount to be Paid (US$/Tshs.)	=	Overload Fee			Surcharge Fee		Total	
Action Taken:								
Name of Weighbridge Operator						Signature		
Name of Driver:		Driver's Licence No.				Driver's Signature		
Remarks:								

* Circle appropriate axle type; 1 = Single axle with single wheel, 2 = Single axle with dual wheels, 3. = Axle in a multi - axle combination

Note:

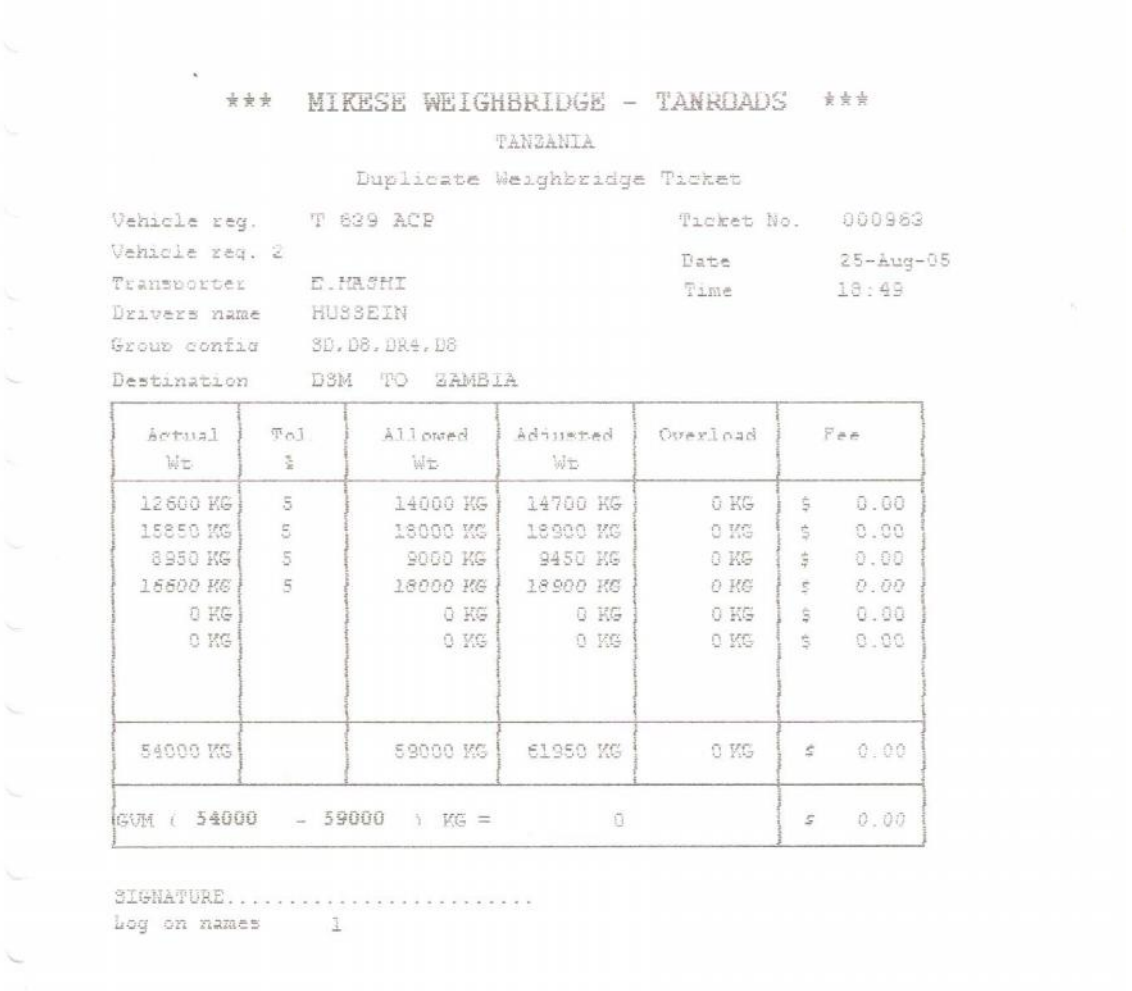
1. *This form is applicable for all types of vehicles using Tanzanian public roads with gross vehicle mass of 3,500 kg (3.5 metric tonnes) or above.*
2. *This Weighbridge Report Form must be carried by the driver throughout the journey and shall be countersigned at successive weighing stations.*
3. *If the vehicle weight is increased after initial weighing, a new form shall be issued and incase overloaded, corresponding overload fees shall be imposed.*
4. *The registered vehicle owner must keep this form for a period of one year from the date of issue; and shall present the form on demand by the Road Authority during that period.*

Figure 1 Tanzania weighbridge report form

The weighbridge officer-in-charge is responsible for the preparation of a daily summary of activities and performance, indicating the number of vehicles weighed, their direction of movement (origin and destination), number of overloaded vehicles, cash collected, vehicles detained and any other irregularity. The daily report is to be followed by a weekly report, monthly report and annual report. TANROADS headquarters directs the report and statistical procedures in co-operation with the TANROADS Regional Manager's Office.

Most of the existing weighbridge-scales in use in Tanzania have been manufactured by the English Company Avery. They are mechanical and do not produce printouts of data. However, most of them are now being replaced with new electronic scales which print out certificates as shown in Figure 2 for the electronic weighbridge at Mikese.

Zanzibar, which is part of Tanzania with own Government, does not currently have any weighbridge for overload control and is looking forward to start using weighbridges based on the recommendations of this report.



*** MIKESE WEIGHBRIDGE - TANROADS ***

TANZANIA

Duplicate Weighbridge Ticket

Vehicle reg. T 699 ACP
Ticket No. 000983
Vehicle reg. 2
Date 25-Aug-05
Transporter E.MASHI
Time 18:49
Drivers name HUSSEIN
Group config 3D.D8.DR4.D8
Destination DSM TO ZAMBIA

Actual Wt	Tol %	Allowed Wt	Adjusted Wt	Overload	Fee
12600 KG	5	14000 KG	14700 KG	0 KG	$ 0.00
15850 KG	5	18000 KG	18900 KG	0 KG	$ 0.00
8950 KG	5	9000 KG	9450 KG	0 KG	$ 0.00
16600 KG	5	18000 KG	18900 KG	0 KG	$ 0.00
0 KG		0 KG	0 KG	0 KG	$ 0.00
0 KG		0 KG	0 KG	0 KG	$ 0.00
54000 KG		59000 KG	61950 KG	0 KG	$ 0.00
GVM (54000 - 59000) KG = 0					$ 0.00

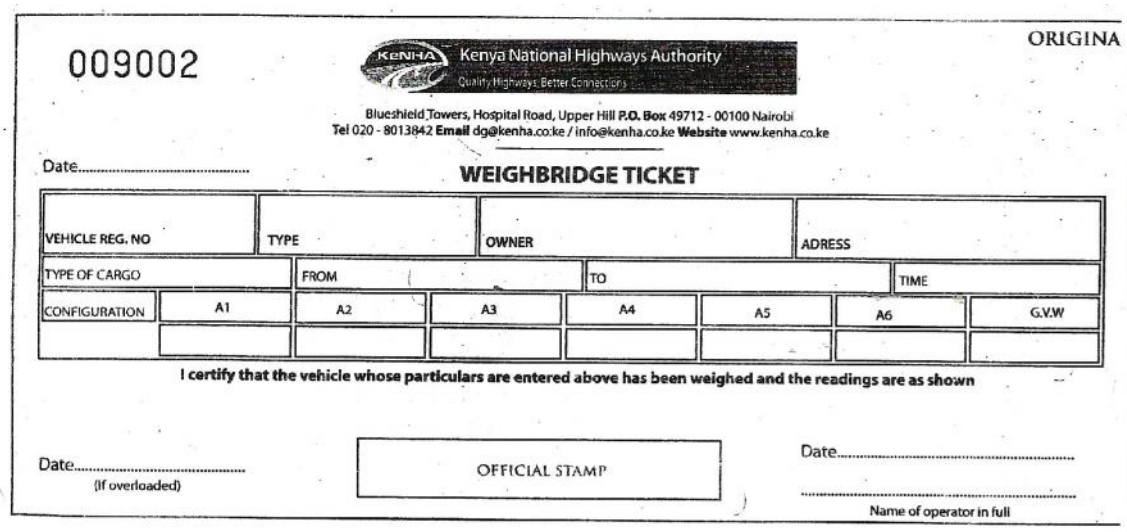
SIGNATURE.....
Log on names 1

Figure 2: Printout certificate at Mikese weighbridge station

3.5.2 Overload reporting format in Kenya

In Kenya, all vehicles with a carrying capacity of 7 tonnes and above must be weighed; vehicles of less tonnage which are deemed to be heavily laden are also weighed.

There is no standard printout certificate for weighbridges in Kenya. However, KeNHA uses a weighbridge ticket shown in Figure 3, which is very concise and provides minimal information.



009002

ORIGINA

Kenya National Highways Authority
Quality Highways Better Connections

Blueshield Towers, Hospital Road, Upper Hill P.O. Box 49712 - 00100 Nairobi
Tel 020 - 8013842 Email dg@kenha.co.ke / info@kenha.co.ke Website www.kenha.co.ke

Date.....

WEIGHBRIDGE TICKET

VEHICLE REG. NO	TYPE	OWNER	ADRESS
TYPE OF CARGO	FROM	TO	TIME

CONFIGURATION	A1	A2	A3	A4	A5	A6	G.V.W

I certify that the vehicle whose particulars are entered above has been weighed and the readings are as shown

Date.....
(If overloaded)

OFFICIAL STAMP

Date.....

.....
Name of operator in full

Figure 3 KeNHA weighbridge ticket

3.5.3 Overload reporting format in Uganda

In Uganda, weights are recorded for each axle. There is no group measurement and no standard weighbridge printout certificate or reporting format.

3.5.4 Overload reporting formats in Rwanda and Burundi

There are currently no overload control weighbridges in Rwanda and Burundi and therefore no format for reporting overloading.

3.6 Recommended Weighbridge Printout Certificate

The format of the typical printouts coming from different models of weighbridges may not be suitable to act as a Weighbridge Clearance Certificates. Thus due to the presence of many printouts coming from different weighbridges with inadequate information, it has been necessary to develop a common Weighbridge Printout Certificate for use along EAC corridors.

Based on the recommended data to be collected in section 3 and the review of weighbridge reports in EAC partner countries in section 5, a new printout certificate has been developed based on the following:

- Automatic depiction of data as automatically captured or manually entered into the computer
- The allowable axle and GVM limits agreed across EAC region
- The agreed upon vehicle axle configurations across EAC region
- Decriminalization of overloading and use of an administrative fee for overloaded vehicles

Recommendation

A uniform weighbridge printout certificate in Appendix 2 i.e. Figure A.1 is recommended for use across the EAC region to be printed on A5 size paper

It has to be noted that the relevant axle groups (max. of 5) in the certificate will automatically appear based on the vehicle's axle configuration.

3.7 Reports and Formats

3.7.1 Importance of effective reporting

The quality and extent of weighing data that is collected at permanent weighbridges varies enormously amongst countries. As a result, such data is of limited value for broader planning purposes, such as the derivation of vehicle equivalency factors. Moreover, such data is not shared on a regional basis and dilutes the enforcement process in terms of targeting habitual offenders.

Appropriate representation of data will be effective in communicating the necessary information to the reader. Reports need to be concise, avoiding overwhelming the reader with volumes of data, where the absolutely necessary statistics are included in appendices.

3.7.2 Recommended types of reports and formats

There are many types of reports that contain statistics summarised per hour, day, month or year. Hourly, daily and monthly data is for lower and middle management and annual data for top management. Once data has been collected for a number of years, medium and long term trends can be evaluated. Most of these reports are for the purposes described in section 2.

A number of studies have been carried out to review the state-of-the-art reports generated from overload data in the eastern and southern Africa (ESA) and it is not the intention of this report to repeat the same. Based on such reviews, certain types of statistics and reports have been found important for the monitoring of the performance of weighbridges and overloading trends.

Recommendation

The following statistics and reports should be calculated from the overload control data and be shared among weighbridge stations which would be able to access them at a central database

(a) Vehicles weighed, overloaded and charged per month and per annum (Figures A.2 - A.4, Table A.1 in Appendix 2):

- A distinction should be made between the number of vehicles overloaded within the allowable tolerance and those that exceed the tolerance. The number (and percentage) of overloaded vehicles that fall within the tolerance should be monitored.
- A more detailed analysis is to monitor the percentage of overloaded vehicles that are within the tolerance due to overloads on axles or axle units only, those that are overloaded due to overloads on vehicle or combination mass only and those that are overloaded due to overloads on both criteria.

(b) Vehicles weighed, overloaded and charged per weighbridge (Table A.2 in Appendix 2): This analysis enables the responsible authority to evaluate the performance of individual weighbridges.

(c) Daily and hourly weighing statistics (Figures A.5 -A.6 in Appendix 2): These statistics are useful for evaluating the operational performance of a weighbridge, both on an hourly and a daily basis. They can also be used to calculate bonuses/penalties for weighbridges involving PPP.

(d) Average overloads (Figures A.7 - A.8 in Appendix 2):

- Average overloads relating to permissible maximum axle, axle unit, vehicle and combination masses should be calculated in order to monitor trends in the degree (severity) of overloading.
- Monitoring the degree of overloading is essential as in some cases the extent of overloading (percentage of vehicle overloaded) may remain constant or decrease, whereas the degree of overloading could have a completely different trend.

(e) Maximum overloads (Table A.3 and Figure A.9 in Appendix 2):

- The maximum overloads in terms of the regulations relating to axles, axle units, vehicles and combinations should be identified.
- The average of the 100, 500 and 1 000 maximum overloads for a given period can also be used as an indicator for monitoring trends in the degree of overloading.

(f) Distribution of vehicle overloads (Figure A.10 in Appendix 2):

- Monitoring the distribution of overloading can also be used to evaluate trends in terms of the degree of overloading.
- The percentage of overloaded vehicles in various kilogram bands (e.g. 0 – 500 kg, 501 – 1 000 kg etc.) over a period of time will give an indication of any trends – increases or decreases in the degree of overloading.

(g) Transport operator statistics (Table A.4 in Appendix 2):

- Various statistics to evaluate the extent and degree of overloading of selected transport operators should be determined.
- Two criterion should be used for the selection of operators: (1) those that have had more than a specified number of vehicles weighed during the period being analysed (e.g. a minimum of 100 vehicles) and with a high percentage of vehicle overloaded and charged and (2) those with a much lower minimum number of vehicles weighed (e.g. 10 or 20 vehicles), but with high average overloads

(h) Vehicle class statistics (Tables A.5 - A.6 in Appendix 2): Used to evaluate the overloading characteristics and trends of vehicles with various axle configurations such as a 6-axle articulated vehicle (class 123), a 5-axle articulated vehicle with a two-axle drawbar trailer (class 12211) and a seven-axle interlink (class 1222). Average E80s per vehicle class can also be determined to assess damaging effect of each class. The statistics can also be used to monitor trends in the utilisation of various vehicle classes.

(i) E80 statistics (Table A.5 and Figure A.11 in Appendix 2): The average E80s per vehicles class, axle, axle unit (or other parameter) can be determined assuming a specific damage coefficient e.g. 4.5 (used in Tanzania and Kenya).

(j) Commodity statistics (Table A.7 in Appendix 2): These statistics are used to evaluate the overloading characteristics of the most common commodities transported.

4 FRAMEWORK FOR INTERCONNECTION OF WEIGHBRIDGES FOR MONITORING, STORAGE AND SHARING OF DATA

4.1 Objective and Methodology

The Objective is to develop a framework for interconnection of weighbridges in the region with a regional data centre for monitoring the performance of weighbridges and storage of data.

The methodology included:

- Taking an inventory of existing weighbridges in EAC member countries
- Reviewing the state of interconnectivity of weighbridges within member countries
- Review of potential methods of interconnection and data sharing
- Obtaining feedback from JICA team on their study with regard to weighbridges

4.2 Types of Weighbridges

There is generally a lack of consistency with regard to the technical specifications of weighbridges and weighbridge facilities in the region. Little attention is also given to the selection of the types of weighbridges available for use in the EAC region. Many weighbridges cannot correctly weigh axle units or GVM. In many places, the weighbridges that are used do not match the traffic demand – they are either too small or too large. The correct application to enable optimum performance is not always obvious and harmonization is therefore necessary.

An overview of the types of weighbridges has been covered by InfraAfrica[8], PADECO[9] and others and it is not the intention of this report to repeat its detailed discussion. In general, there are two types of weighbridges in each of the three ways of categorisation as follows:

- Types of weighbridge: Fixed versus mobile scales
- Methods of weighing: Static versus dynamic
- Weighbridge mechanism: largely mechanical versus electronic

4.2.1 Fixed weighbridges

Single-axle weighbridges are widely used throughout the region. They are small (typically a single, 3.2 m × 1 m deck) transversal devices that weigh one axle of a vehicle at a time. The weighing operator has to add the masses of the individual axles to determine the total vehicle mass; total combination mass; and axle unit masses.

Although single axle scales have proved to be effective in the past, they have many shortcomings such as:

[8] InfraAfrica. Preparation of Synthesis Report and Guidelines on Overload Control; Regional Guidelines and Specifications on Aspects of Overload Control, World Bank Sub-Saharan Africa Transport Policy Program, May 2008

[9] PADECO. Study for the Harmonization of Vehicle Overload Control in the East African Community. Draft Final Report, 2011

- The sites have to be constructed to very precise level requirements which cannot easily be met.
- Weighing of multi-axle vehicles is cumbersome and time-consuming.
- Calibration is difficult and the accuracy is low.
- They are notoriously inaccurate for weighing tandem and tridem axle units.

Due to above shortcomings and pressure from the courts with regard to the accuracy of these scales, it is important that this type of scale be phased out in the East African region in favour of axle-unit and multi-deck weighbridges.

Axle-unit weighbridges consist of a single deck supported on the weighing mechanism (usually 4 load cells). The size of these weighbridges is typically 3.2 m x 3 m to 3.2 m x 4 m. Some of the benefits of the axle unit scale are:

- They can weigh any axle unit of a truck (i.e. single axle, tandem or tridem unit).
- Level tolerances on the approach slabs do not have to be as accurate as for the single axle weighbridge and their calibration is easier.
- It is far quicker to weigh multi-axle vehicles.

Axle unit scales are typically placed on strategic routes that carry less than 500 heavy vehicles per day. These scales are simpler, cheaper and easier to maintain than multi-deck scales. Axle unit scales have largely replaced the single axle scales in many EAC/SADC/COMESA countries where the latter are gradually being phased out.

Multi-deck scales are placed where the traffic volumes warrant i.e. traffic > 500 heavy vpd. They consist of four individual decks with lengths of 3 m, 6 m, 7 m and 6 m respectively, giving an overall length of 22 m, with a width of 3.2 m. Some of the benefits of multi-deck scales are:

- Level tolerances on the approach slabs are not a problem as the whole vehicle is weighed in one operation.
- Vehicle weighing is very efficient.
- Short calibration tests can easily be done without test weights.
- It is more difficult to “manipulate” the weighing process, as the whole vehicle is weighed in a single operation.

Cost estimates of typical weighbridge facilities vary considerably depending on the level of requirement (office, park-off area, canopy and staff accommodation), and are indicated in Table 6.

Table 6: Typical weighbridge costs estimates

Type of Weighbridge	Cost (US$)
Single axle scale	0.4 – 1.0 million
Axle unit scale	0.4 – 1.0 million
Multi-deck scale (four decks)	1.5 – 4.0 million

4.2.2 Mobile or portable weighbridges

This is probably the most versatile method of weighing as in theory it should be possible to weigh any vehicle, anywhere, anytime. However, if the vehicle is not measured in one operation, levelling mats may be necessary or the results will have low accuracy. The purpose of levelling mats is to lift a non weighed axle to the level of the scale platform.

The error of a weighing with portable wheel load scales has two sources: the ***scale*** itself and the so called *"**external factors**".* The accuracy of the *scale* is stated in the data sheet and in the manual. The *external factors* are defined as the influences which make *a wheel or axle load lower or higher than it would be under perfect conditions*. The perfect condition is: absolutely *level site*, all *suspensions* of the vehicle in an *average, frictionless position*, *no braking*, *no vehicle oscillation*. This definition shows that the external factors *have nothing to do with the scale accuracy*, or in other words; the scale only can measure what it "*feels*".

The following is a detailed explanation of the ***errors caused by external factors.***

***Tilting*:** Tilting of the *vehicle* causes a displacement of the centre of gravity and thus a load shift towards the lower wheels. At 5% slope the error is -0.12% of the measured weight! Therefore weighing on a slope shows different results than on a level site.

The vehicle suspension: The load a wheel or an axle is carrying is directly related to the compression of the spring of the suspension. This fact is extremely important for a precise weighing of vehicles *with 3 and more axles*. Errors occur in all cases where a *lifting up* of an axle results in a *compression* of the spring of the suspension. A two axle truck is not susceptible to such effects.

***Friction in the suspension*:** The magnitude of friction forces depends on the construction of the suspension and of its maintenance. A *modern vehicle* in a good as new condition generates *almost no friction forces*, *old and poorly serviced vehicles* may generate friction forces up to 5% of the axle load, which is up to *500 kg* on a 10 t axle. The direction of the friction force is always opposite to the actual movement of the axle. When weighing a wheel the *friction may result in a higher or lower weight*, depending on how the axle movement came to a rest in static weighing, or depending on the actual vertical movement of an oscillating vehicle when passing over the dynamic scale.

Brake reaction forces (static weighing only): Depending on how the braking forces are transferred to the vehicle chassis, the axles may be under tension if the brake is not released. After releasing the brake the vehicle goes into its normal position, provided that there is no friction in the suspension. To prevent from all unfavourable effects *the driver must release the brake before the reading is taken*. If the site is not perfectly level it is not possible to release the brake for a longer time interval.

Vehicle oscillation (dynamic scales only): *A vehicle in movement is always oscillating* more or less in vertical direction. Depending on the actual amplitude of the oscillation the moment the axle passes the WIM scale the measured weight will be higher or lower than the real static weight. The errors are increasing with the vehicle speed and with the un-evenness of the site. Additional errors up to 5 % at a speed of 10 km/h may occur under unfavourable conditions.

Site unevenness: Site unevenness results in errors due to tilting, to the suspension, to friction and to vehicle oscillations as described above.

Depending on the configuration used, the influence of the external factors is in the best case zero (gross weight determined in one operation) or in the worst case (weighing vehicles in poor maintenance condition axle by axle on an unfavorable site) the influence is definitely higher than the error of the scale. When using a portable weighing system the expected external factors have to be taken into consideration. *The more wheel load scales are used the higher the overall accuracy is*. A

system with only two scales and four levelling mats is very convenient to operate, but it is most sensitive for errors due to external factors.

Table 7 shows the possible range of the external errors when determining the axle load. In many applications the use of tolerance deductions is a good approach to be on the "safe side".

Table 7: Possible external errors when determining axle load using portable scales

S/N	Situation	Error
1.	Two axle truck, any vehicle and site condition but horizontal site in driving direction, static	1%
2.	Vehicles with double and triple axle systems in good condition on a good site, static	2%
3.	Vehicles with double and triple axle systems in poor condition on a poor site, static	5%
4.	Any vehicle in good condition on a good site, dynamic at 2 km/h	2%
5.	Any vehicle in poor condition on a poor site, dynamic at 10 km/h	10%

We have seen that unless we have a scale that can weigh the whole vehicle in one stop, there are several important aspects that have to be taken into consideration when split weighing a vehicle in order to achieve an accurate result to avoid prosecution. If the levels of all the axles in the axle unit are not within the required tolerance, the scale readings will not be sufficiently accurate for law enforcement purposes. Due to the many variables inherent in the total weighing system that constitutes a portable weighing system, e.g. the irregularity of the road surface, the interaction of different axles in an axle unit (only one axle is weighed at a time and the sum of the masses of the different axles are added to provide the mass of the axle unit), the consistency of the installation (the placement of the scales and the levellers on the road surface and in relation to one another), portable scales are not recommended to be used to prosecute overloaded heavy vehicles. The recommended use of portable scales is in conjunction with a fixed weighbridge scale. Roaming axle load control officers can use portable scales to detect possibly overloaded heavy vehicles on alternative routes and then escort or send them to the fixed weighbridge facility for accurate weighing.

A review of portable weigh scales manufacturers' websites shows that some claim scale accuracy of ±0.1% static, ±1% dynamic accuracy with levelling track and ±3% dynamic accuracy without levelling track. Without disputing these figures, they do not explain the major challenge to using portable scales which comes from external factors. Mobile scale, as is for single axle scales, may also promote corruption. In addition, we are building an EAC Overload Control Management System in which all weighbridges are interconnected and all weighing data is stored and can be accessed from all weighbridge stations and stakeholders' headquarters. Obviously, portable weighbridges do not fit into this arrangement and should best be used for screening purposes. If a country insists on using them for enforcement it should do so on local cargo.

In conclusion, portable weighbridges are used for screening purposes and can be setup next to any road where there is a suitable surface and an area to pull off and weigh trucks. These scales cannot be used for law enforcement purposes, but are sufficiently accurate to identify vehicles that are probably overloaded with a high degree of confidence. Portable scales are not recommended to be

used for enforcement; the recommended use of portable scales is in conjunction with a fixed weighbridge scale which can also capture data that is to be shared through interconnectivity.

4.2.3 Weigh-in-motion scales

High Speed Weigh In Motion (HSWIM) scales are used extensively for "screening" overloaded vehicles from the main stream of traffic which reduces the number of legal vehicles being delayed at the static weighing facility. It is more appropriate on high volume roads, but can also be effective on lower volume roads for both screening and traffic data collection. However, because of the relative inaccuracy of the WIM devices (accuracy typically +/-10% to15%) they cannot normally be used for enforcement purposes.

Low Speed Weigh in Motion (LSWIM) scales are a relatively new type of technology and operate optimally at constant speeds of about 5km/h. They are also equipped with a rigid deck, supported on four load cells designed to weigh one axle at a time. LSWIMs are purported to be more accurate than HSWIMs but less accurate than fixed scales. To date LSWIMs have not been used for prosecution, but studies are being conducted to accredit these scales for prosecution purposes.

4.2.4 Weighbridge mechanisms

With regard to mechanisms, weighbridges range from ***Mechanical scales*** which give a mechanical read-out of measured weight and cannot provide an electronic reading to ***Digital load cell scales*** which automatically record weights and provide an electronic reading. Although widely used in the region, mechanical scales are increasingly being replaced by newer generation electronic scales to avoid the weighing process that is manual, cumbersome and potentially fraught with fraud.

4.3 Selection of Weighbridges

Recommendations

- *Only electronic weighbridges should be used for overload control along the EAC road corridors.*
- *Only axle-unit and multi-deck weighbridge scales should be used along the EAC road corridors. The actual type of weighbridge should be decided based on the volume of heavy vehicles expected to be weighed in a day as shown in Table 8.*
- *WIMs and mobile/portable scales should be used for screening purposes to reduce the number of trucks that need to be weighed at fixed weighbridges.*

Table 8: Type of weighbridge in relation to heavy vehicle traffic volumes

Type of Weighbridge	Heavy Vehicle Traffic Volume (vpd)
Multi-deck Scale (3.2 m x 22 m)	> 500
Axle Unit Scale (3.2 m x 4 m)	< 500

Note: Although traffic is the most important determinant, other factors should also be considered such as experience with equipment already in use, manufacturer's guarantee, maintenance, calibration and operation complexity. In the final analysis, the choice of weighbridge facility should be decided by carrying out a full life-cycle analysis of the status quo versus the proposed option.

4.4 EAC Regional Trunk Road Network

The EAC Region is served by several corridors but those of strategic and commercial importance for the region are the Northern and Central Corridors as shown in Table 9. Table 10 shows the different heavy vehicle volumes on the corridors.

Table 9: EAC strategic road corridors

Corridor	Country	Route and served cities/towns	Length (km)
Northern Corridor	Kenya	Mombasa - Nairobi - Eldoret - Malaba	900
	Uganda	Malaba - Kampala - Masaka - Katuna	640
	Rwanda	Katuna - Kigali - Kayanza	230
	Burundi	Kayanza - Bujumbura	110
	Total		**1,880**
Central Corridor	Tanzania	Dar es Salaam - Dodoma - Isaka - Nyakanazi - Rusumo	1,190
	Rwanda	Rusumo – Kigali	170
	Total		**1,360**

Source: PADECO, 2011. Study for the Harmonization of Vehicle Overload Control in the East African Community

Table 10: Traffic volumes along the Northern and Central Corridors

Corridors	Countries	Sections	Traffic Volume (Number of Trucks/Day)			
			Light	Medium	Heavy	Total
Central Corridor	Tanzania	Dar es Salaam - Dodoma	3,248	1,298	512	5,058
		Dodoma – Isaka	297	277	338	912
		Isaka - Nyakanazi	395	280	236	911
		Nyakanazi - Rusumo	173	102	120	395
	Rwanda	Rusumo – Kigali	1,235	199	74	1,508
Northern Corridor	Kenya	Mombasa - Nairobi	1,965	1,630	1,067	4,662
		Nairobi – Eldoret	9,027	1,687	504	11,218
		Eldoret - Malaba	2,051	976	343	3,370
	Uganda	Malaba - Kampala	4,505	1,022	685	6,212
		Kampala - Masaka	3,527	1,210	161	4,898
		Masaka - Katuna	971	471	140	1,582
	Rwanda	Katuna - Kigali	616	276	107	999
		Kigali - Kayanza	1,138	214	29	1,381
	Burundi	Kayanza - Bujumbura	544	236	34	814

Source: PADECO, 2011. Study for the Harmonization of Vehicle Overload Control in the East African Community

4.5 Review of Weighbridges in EAC countries

As indicated in Table 11, single axle scales are used exclusively in Kenya and Uganda while Tanzania uses mostly axle unit scales. Multi-deck scales are not used in any of the countries although there are plans to introduce them in Kenya. Mobile weighbridges are also used in all countries for random policing and screening purposes. Apart from Uganda, WIMs are not used in the other countries although Kenya is planning to introduce them in the near future. Weighbridges within Partner States are mostly not linked electronically. Tables 12 and 13 show the weighbridges in regional corridors and at borders respectively.

Table 11: Type and number of weighbridges in EAC region

Country	Fixed			Portable	WIM
	Single axle scale (3.2m x 1m)	Axle Unit scale (3.2m x 4m)	Multi-Deck scale (3.2m x 22m)		
Burundi	0	0	0	0	0
Kenya	13	0	0 (1)*	2	0 (2)*
Rwanda	0	0	0	0	0
Tanzania	3	14	0	14	0
Uganda	3	0	0	4	3

*Figures in brackets indicate weighbridges to be installed in near future

Source: PADECO, 2011. Study for the Harmonization of Vehicle Overload Control in the East African Community

Table 12: List of weighbridges along the EAC corridors

Country	Weighbridge Location	Type of Weighbridge
Kenya	Mariakani (Mombasa)	Fixed
	Athi River	Fixed
	Gilgil	Fixed
	Webuye	Fixed
	Maai Mahiu	Portable
	Ruiru	Portable
	Mtwapa	Portable
	Busia	Portable
	Kisumu	Portable
	Amagoro (Malaba)	Portable but permanent
Uganda	Busitema	Portable
	Masaka (Lukaya)	Fixed
	Mbarara	Fixed
	Mubende	N/A
Tanzania	Kibaha	Fixed
	Mikese	Fixed
	Nala (Dodoma)	Fixed
	Njuki (Singida)	Fixed
	Tinde (Shinyanga)	Fixed
	Mwendakulima (Shinyanga)	Fixed
	Mutukula (Kagera)	Fixed

Table 13: List of weighbridges on the EAC countries borders

S/N	Border	Weighbridge Location
1.	Burundi/Rwanda	Gasenyi/Nemba
2.	Kenya/Tanzania	Namanga
3.	Kenya/Uganda	Malaba
4.	Rwanda/Tanzania	Rusumo
5.	Rwanda/Uganda	Gatuna/Katuna
6.	Tanzania/Uganda	Mutukula

The 8th Meeting of the Sectoral Council on Transport, Communications and Meteorology[10] observed that there were several border posts (listed in Table 14) in the region that needed to be converted into OSBPs and be provided with weighbridges.

Table 14: List of border posts with OSBP potential and in need of weighbridges

S/N	Border	Border Posts
1.	Kenya/Uganda	Busia
2.	Kenya/Tanzania	Lunga lunga/Horohoro, Taveta/Holili, Sirari/Isebania
3.	Rwanda/Uganda	Kagitumba/Mirama hills
4.	Burundi/Rwanda	Ruhwa/Ruhwa, Kanyaru/Akanyaru
5.	Burundi/Tanzania	Kobero/Kabanga, Mugina/Manyovu

4.6 Number and Location of Weighbridges on the Regional Road Network

PADECO[11] found that the deployment of numerous weighbridges along the EAC corridors at relatively close intervals is responsible for significant delays to commercial traffic and is contributing to additional transport costs. There are instances in which more than five hours is required at some weighbridge stations, a consequence of traffic congestion in or near the stations. There is a need for adopting an appropriate strategy for deciding on the number and location of weighbridges along the regional road network. Also, separate operation of weighbridges on both sides of international borders is unnecessary and results in inefficient use of scarce resources. The study gave the following recommendations on the location of weighbridges:

- The development of a regionally coordinated strategy for the control of overloading by the judicious deployment of weighbridges along EAC corridors in accordance with a regionally agreed network of weighing stations.
- The identification on a regional map of the key points from which vehicle overloading can be effectively controlled from a regional perspective.
- In locating weighbridge stations, preference to be given to the establishment of such stations in common control areas at border posts as well as to the joint use of weighing stations and related facilities.
- All weighbridges on the regional road network to be networked and to be linked electronically to a regional data centre to facilitate sharing of information on overload control.

The current anger against weighbridges is a result of the inefficiencies at the weighbridges and the wrong choice of the type of weighbridge to be used as well as confusion with the many road blocks that waste transporters' time and have been turned into bribery centres. The campaign to have only two weighbridges at the entry and exit of a country is partly a result of the above confusion. Resorting to only two weighing points means one has not determined the **optimal spacing** and has only addressed the issue of eliminating non-tariff trade barriers with no consideration for the potential damage to roads. The arrangement also stands to benefit land-locked countries at the expense of other countries with sea ports which stand to shoulder the cost of increased road damage. The location of weighbridges is one of the critical factors which determine their efficiency.

[10] Report of the Sectoral Coordination Committee. The 8th Meeting of the Sectoral Council on Transport, Communications and Meteorology, 16th – 20th May 2011, Arusha.
[11] PADECO. Study for the Harmonization of Vehicle Overload Control in the East African Community. Draft Final Report. 2011

A more realistic solution to the overloading problem at this stage seems to be a comprehensive and effective law enforcement programme, consisting of a network of strategically located weighbridges. When self-regulation becomes fully operational, the overload control functions of the weighbridges will reduce considerably, but they can then be transformed to operate as Traffic Management Centres (TMCs)[12].

4.6.1 Review of approaches for optimum spacing of weighbridges

The challenges that arise from the absence of a harmonized framework for overload control are most apparent along regional transport corridors. They result in lack of regional harmonization of axle load limits which makes management difficult, and in lack of faith in the systems used in different countries, such that vehicles are sometimes weighed frequently, including at weighbridges a few kilometres apart but on different sides of a common border. With this in mind, optimization can be undertaken with regard to the deployment of weighbridges across the region's road network.

If the philosophy is to totally eradicate overloading, it will be futile and too costly. On the other hand, if the philosophy is to conduct ad-hoc overload control on a limited budget, it will be equally futile because the freight industry is good at taking advantage of such shortcomings. An optimisation of the number and location of weighbridges is therefore very important.

Two approaches for the optimization of the location of weighbridges on a road network are reviewed below.

The 80:20 principle or "Pareto Principle"

The Pareto Principle or "80:20 rule", assumes that 80 percent of overloading can be effectively controlled by focusing effort at 20 percent of the locations. The application of the Pareto Principle with regard to the prioritisation of weighbridges on a road network will result in weighbridges being located on roads with the highest heavy vehicle traffic volumes and where the greatest impact can be achieved with the least cost and effort. The law of diminishing returns is very important in this regard i.e. for every weighbridge added after a certain number, every additional investment has a smaller return until the return on that investment does not warrant any further investment.

A Pareto Principle approach was developed for Mozambique[13] (ANE 2007). It considers the major criteria influencing the weighbridge prioritizing decisions to be project value (cost) and the extent of protection. The extent of protection of a weighbridge largely depends on the volume of heavy traffic it can accommodate. Thus these two important criteria can be differentiated into cumulative cost of the weighbridge project and the AADTT at the location of the weighbridge sites (or potential sites).

To bring both the cost and heavy traffic volume into perspective, a coverage factor is calculated to indicate the amount of AADTT that is covered by spending $1 on a weighbridge on an average annual day of the expected life of the pavement. This index (coverage factor) merely indicates the "value-for-money" for the weighbridges ranked in the scaled down budget. The average and standard deviation of this index is also calculated.

[12] J Bosman and M D'Angelo. A PPP "Paradigm" for overload control on trade corridors in Africa.
[13] ANE. Consultancy Services for a Heavy Vehicle Overloading Control Study. Final Report. Vols. 1 & 2, 2007

Between 15-20% of AADTT on the Mozambican road network is overloaded and contributes to the largest portion of pavement damage caused by vehicles. Thus a minority of vehicles is causing the majority of pavement damage which coincides with the Pareto 80/20 principle.

Should the Pareto 80/20 principle be followed to the letter, an estimate can be made that approximately 80% (the majority) of road damage caused by overloaded heavy vehicle can be curbed by omitting the lower ranking 20% (the minority) of the proposed weighbridges and focusing on the remaining proposed weighbridges. Similarly it can be seen as controlling the 20% (minority) of heavy vehicles (the overloading offenders) with only focusing on 80% (majority) of the proposed weighbridges.

Using this principle as a basis, a sensitivity analysis can be performed. The lower ranking weighbridges are omitted one by one to determine what the outcome will be on preventing damage to the road network. A sensitivity analysis is performed to determine cost benefit with omitting weighbridges in single increments from the initial proposal. The standard deviation (SD) of the Coverage Factor is used in the sensitivity analysis; the SD is initially calculated for the total weighbridges proposed. In single increments, each of the lowest ranking weighbridges is removed from the list and a corresponding new SD is calculated. The SD of the coverage factor is used as guideline to determine the stopping rule for omitting weighbridges from the initial proposal. In conclusion, the sensitivity analysis indicated at which point it is not feasible anymore to omit or add weighbridges from and to the initial proposal in order to prevent road damage and curb overloading.

Overload Control Index (OLCI)

The law of diminishing returns is very important in deciding on an optimum number and location of weighbridges (i.e., for every weighbridge added after a certain number, every additional investment has a smaller return until the return on that investment does not warrant any further investment). In this regard, the addition of a new weighbridge on the regional road network will only be economically viable if the capital, maintenance and operational costs are less than the savings in pavement damage due to overloading. The economic viability analysis should be conducted over the lifetime of the weighbridge network which requires the costs and benefits be converted to Net Present Values (NPVs).

Strategic matters that influence the location of a weighbridge include proximity to a port-of entry (border post or a port) or generators of heavy vehicle traffic, such as industrial areas and whether the location is such that escape routes are minimized and that the greatest impact on reducing overloading can be achieved i.e., where heavy vehicle traffic volumes are the highest and/or the extent of overloading is the highest. The influence of the strategic matters on the location of a weighbridge should be evaluated after the economic viability of the location has been established.

A methodology has been developed to determine how the location of weighbridges can be optimized within an overload control network. This methodology is based on the determination of an overload control index (OLCI) which converts the different NPVs of overload control benefits and costs to a common factor which can be used to rank the options. For an overload control network to be financially viable, the OLCI should be equal to or greater than two.

In summary, the weighbridge location criteria consist of three components:

- Economic: Benefit of overload control (OLC) must be greater than the cost of OLC plus the cost of the remaining overload damage.
- Strategic: Port-of-Entry, generators of HV traffic, minimum escape routes and maximum impact to reduce overloading.
- Local: Topography, geometric standards, availability of services, cost of land and environmental constraints.

Economic viability is analysed in the following way:

- Economic viability must be calculated on a network basis and not per individual weighbridge.
- Economic viability analysis must be calculated over the lifespan of the weighbridge network [convert costs and savings to NPVs].
- Benefits > Costs: Capital, operational and maintenance costs must be less than the savings in pavement damage.

Two major evaluation tools are used:

(i) The Overload Control Index (OLCI)

The OLCI converts the NPVs of OLC benefits and costs to a common factor which can be used to rank alternative OLC network options.

$$\text{Benefi Cost Ratio (Ratio 1)} = \frac{\text{NPV (Road Damage Cost Saving)}}{\text{NPV (Capex + Maintenance)}} \geq 1$$

$$\text{Total NPV Ratio (Ratio 2)} = \frac{\text{NPV (Do - nothing Road Damage Cost)}}{\text{NPV (Capex + Opex + Maintenance + Remaining OL Road Damage)}} \geq 1$$

$$\text{OLCI} = \text{Ratio 1} + \text{Ratio 2} \geq 2$$

(ii) "First Order" Weighbridge Location Curve, which is a plot of the OLCI against road length for different ranges of location.

The curve is used to indicate preliminary optimal location/spacing of weighbridges in forming a network. Such a network would need some adjustment in terms of strategic factors and is therefore regarded as a "first-order" network. Table 15 summarises the "first-order" weighbridges locations assumptions.

Table 15: "First-order" weighbridges locations

Length of Road (km)	No. of weighbridges	Location
< 200	0	
200 - 500	1	Middle of the road
500 - 750	2	Either end of the road
750 - 900	3	Either end of the road and in the middle
900 - 1,150	4	Either end of the road and two in the middle
1,150	5	Either end of the road and three in the middle

Practically, they will not be at equal distances due to strategic factors.

Results of such analyses show that more weighbridges are no guarantee of more efficient overload control. An analysis for weighbridge location in Angola showed that alternatives with the fewest weighbridges (located >500 km) was optimum.

The OLCI approach, which does not pre-assume an existing situation, is a more rational way of determining the optimal number and location of weighbridges. It was also recommended by the JICA study[14].

4.6.2 Recommendation on the Number and Location of Weighbridges

During the Experts and Stakeholders Meetings which took place in partner countries, the Consultant observed that all countries were worried of the costs that they would incur to meet the recommended standards and install new weighbridges and wanted to know who will foot the bill. We therefore believe that the recommended weighbridges should be at existing locations as far as possible. This is also in line with the harmonization spirit which is actually aimed at accommodating existing situation whenever possible.

Strictly using the OLCI approach that optimizes the location of weighbridges means coming up with entirely new locations that may not be feasible at the moment. To start with, a simple approach that uses a fixed recommended distance between weighbridges is used. A distance of 500 km as found optimum in many cases using the OLCI approach and as can be seen to be most appropriate using the "First order weighbridge location curves" is adopted.

Other strategic factors that have been used in determining the number and location of weighbridges in the EAC corridors include:

- Ports of entry (Dar es Salaam, Mombasa)
- Commercial centres (such as Nairobi, Dar es Salaam and Kigali)
- Development corridors (Central and Northern corridors)
- Main freight routes
- Traffic volumes
- Availability (or not) of escape routes

Recommendations

- *The recommended number of weighbridges and their locations on the EAC corridors is shown in Table 16.*
- *Individual countries may wish to have more weighbridges for internal use but transit trucks may only be subjected to overload weighing at the stations in Table 16*.
- *Weighbridges shall be installed at all border points shown in Table 17.*

[14] PADECO. Study for the Harmonization of Vehicle Overload Control in the East African Community. Draft Final Report, 2011

Table 16: Recommended weighbridge locations along EAC road corridors

Corridor	Country	Route	Length (km)	Max. No.*	Locations
Northern Corridor	Kenya	Mombasa - Malaba	900	4	Mariakani, Athi River, Gilgil, Malaba
	Uganda	Malaba – Katuna	640	3	Malaba, Masaka, Katuna
	Rwanda	Gatuna - Kayanza	230	2	Gatuna, Kanyaru
	Burundi	Kayanza - Bujumbura	110	2	Kanyaru, Bujumbura
Central Corridor	Tanzania	Dar es Salaam – Rusumo	1,190	4	Vigwaza, Nala, Mwendakulima, Rusumo
	Rwanda	Rusumo – Kigali	170	2	Rusumo, Kigali

*Based on an approx. spacing of 500km and strategic considerations. Weighbridges that appear twice on either side of the border will be in the form of OSBP and shall count as one.

Table 17: Recommended weighbridge locations on EAC countries' borders

S/N	Border	Weighbridge Location
1.	Rwanda/Tanzania	Rusumo
2.	Rwanda/Uganda	Gatuna/Katuna, Kagitumba/Mirama hills
3.	Tanzania/Uganda	Mutukula
4.	Kenya/Uganda	Malaba, Busia
5.	Kenya/Tanzania	Namanga, Lunga lunga/Horohoro, Taveta/Holili, Sirari/Isebania
6.	Burundi/Rwanda	Gasenyi/Nemba, Ruhwa, Kanyaru/Akanyaru
7.	Burundi/Tanzania	Kobero/Kabanga, Mugina/Manyovu

4.7 Review of Weighbridges Interconnectivity in EAC countries

4.7.1 Tanzania

Tanzania, as of December 2010, had a total of 25 fixed scales (one of which was not operational) and 17 mobile scales (three of which were faulty) as shown in Table A.8 in Appendix 3. However, the numbers on the EAC central corridor in Tanzania are 3 single axle, 14 axle unit and 14 portable scales as was shown in Table 11. There is currently no interconnection among them and data is shared through periodical reports.

The percentage of overloaded trucks on the country's roads decreased from about 40% around 2000 (i.e. prior to promulgation of the 2001 Regulations) to about 5% in 2008. PADECO[15] estimates that it is now at 18-20% while TANROADS[16] estimates the number of overloaded vehicles to be less than 25%.

[15] PADECO. Study for the Harmonization of Vehicle Overload Control in the East African Community. Draft Final Report, 2011

[16] Presentation on 'Axle Load Control in Tanzania: Regulations and Operations' prepared for Uganda National Roads Authority Delegation, 29th March 2011

4.7.2 Kenya

Vehicle overloading is checked at the weighbridge stations along the major corridors by KeNHA. Kenya has privatized the operation of some weighbridges, however the Police are responsible for taking drivers of overloaded vehicles to court.

Kenya has a total of 13 single axle and 2 portable scales along the Northern corridor. Both the static weighbridge stations and the mobile weighbridges operate 24 hours a day, seven days a week. The axle weights are recorded by hand at all the weighbridges, except at Mariakani and Athi River, where the scales are connected directly to a computer. Kenya has recently reported to have interconnected the Mariakani and Athi River weighbridges to a central database.

4.7.3 Uganda

Uganda has a total of 3 single axle, 4 portable and 3 WIM scales along the Northern corridor, all not interconnected. Uganda is currently under the process of developing a weighbridge operation system as well as the relevant regulations. They have been introducing WIM equipment and are planning to introduce a computerized system and an organized data capture system.

4.7.4 Burundi

Burundi lacks functioning weighbridges and there is therefore no experience to be learned from the country. Although only the Revenue Authority owns weighbridge equipment at the major clearance points, it does not check if a vehicle is overloaded; the weight of commercial vehicles is checked only for declaration purposes.

4.7.5 Rwanda

Like Burundi, there are currently no overload control weighbridges functionally working in Rwanda and there is therefore no experience to be learned from Rwanda.

4.8 Review of Weighbridges Interconnectivity and Data Sharing Practices

4.8.1 Data Capture, Storage and Sharing

Once data has been captured at the weighbridge, the data can be used as input for the analysis. All these data form part of an Overload Control Management System.

There are two approaches on how to share data. Firstly, a vehicle weighing system may utilise a single database for storing vehicle weighing data, which accumulates in size over time. At the end of each specified period (e.g. every month), only the data for the specified period is exported to a smaller file for transfer to the central database. The easiest method is usually to export the data into a comma-delimited text file, as most computer applications are able to import and export such text files.

The second approach involves server-based systems where the data accumulated at each weighbridge site is replicated at the central server on an ongoing basis, in which case the data export and transfer are not required. This is the recommended approach as for the case of EAC, data has to be replicated on a continuous basis as each vehicle’s data has to be accessible from another weighbridge station on real-time basis.

Data storage at each weighbridge station should be database driven; a well-designed database that can store data that is automatically collected (such as actual axle weights) and manually entered from the weighbridge panel (such as name of operator). The distributed database technology can be implemented where each database at the weighbridge station becomes part of a big database. The replication of information to the centralized database is another way of sharing data, which is preferable.

To support how data should be presented, a server-client application (software) is required so that various reports can be produced from various weighbridges, where a web-based application is preferred. To implement all this, database design that can allow storage and sharing of data is required. Weighbridge technologies that support data storage through database technologies such as SQLServer and MySQL are preferable. In order to share data very effectively and eliminate data inconsistence and duplications, a professional database analysis and design is inevitable.

4.8.2 Cross border overload control

Use of common control areas at border posts

There has apparently been little, if any, effective collaboration between weighbridge unit and customs officials with regards overload control. As a result, there has been uncertainty on the part of customs in dealing with overloaded vehicles although transport permits require commercial vehicles to comply with road traffic laws which include vehicle load limits.

The objective is to improve the effectiveness of the existing overload control operations at very little, if any, additional cost by adopting a more collaborative, streamlined and professional approach involving all organisations operating.

The purpose of the Cross Border Overload Control guidelines prepared by InfraAfrica[17] was to provide information and guidance on how to implement a cross border overload control system (CBOCS) by adopting a more collaborative, streamlined and professional approach between the roads authority, Customs and transport agency in dealing with commercial vehicles that wish to cross a border from one country to another.

The CBOCS initiative is in accordance with the SADC MoU on Vehicle Loading[18] which requires that Member States agree that, in locating weighing stations, preference shall be given to their establishment in common control areas at border posts. Thus, ideally, when new border facilities are being planned, provision should be made for not only locating the weighbridge within the customs area but, also, for sharing the weighbridge facility between the adjacent countries in a one-stop border post arrangement.

[17] InfraAfrica. Preparation of Synthesis Report and Guidelines on Overload Control; Regional Guidelines and Specifications on Aspects of Overload Control, World Bank Sub-Saharan Africa Transport Policy Program, May 2008

[18] SADC: Memorandum of Understanding on Vehicle Loading, March 1999

One Stop Border Posts (OSBP)

The concept of common control areas at border posts has also been given impetus by the One Stop Border Posts Policy (OSBP) adopted by the East African Community[19] and the proposed One Stop Border Posts Bill, 2010. The objective of the OSBP concept is to reduce the number of stops incurred in a cross border trade transaction by combining the activities of both countries' border organisations at a single location with simplified exit and entry procedures and joint processing, where possible. Such eventuality gives rise to the potential for increased effectiveness of cross border controls through greater data sharing and cooperation between the Partner States' border control agencies.

There are generally three main types of OSBP models as follows:

Straddling Facility: This consists of a single building that is literally constructed on the borderline such that officers from each country within the building are actually operating from within their own sovereign territory. This model can be used when a new facility is being built at a relatively flat land border. The advantage is direct access to each national hinterland and the fact that most controls are exercised on national territory with ready access to national police and the courts. Nevertheless, joint inspections and other joint activities still entail and require authorizing officers to execute controls in the common control zone within both countries.

Common One Country Facility: This model consists of a single building being constructed in one of the border countries to house officers from both countries for carrying out border controls. This also has the advantage of being a single facility, but requires sufficient trust and cooperation between the countries to build and operate in only one of the countries. In this model, one country will require the necessary legal authority to carry out controls in the host country and the host country will also require a legal framework which allows officers of the other country to work from its territory.

Juxtaposed Facility: This model consists of facilities in both countries at a common border whereat the officers of the two countries share facilities in the country of entry in each direction of travel. It is a model that is generally used where facilities already exist and or where a river or some other natural barrier forms the boundary as is the case at Malaba and Rusumo. National laws in both countries must authorise officers to carry out controls in terms of their laws in a common control zone in the adjoining State (extraterritorial jurisdiction) and hosting of foreign officials. In the case of juxtaposed border posts, whilst there are two facilities, there will be only one stop for all traffic crossing the border. The schematic diagram in Figure 4 illustrates the operational setup of a juxtaposed border post.

[19] EAC. One Stop Border Posts Policy Paper for the East African Community, 2010

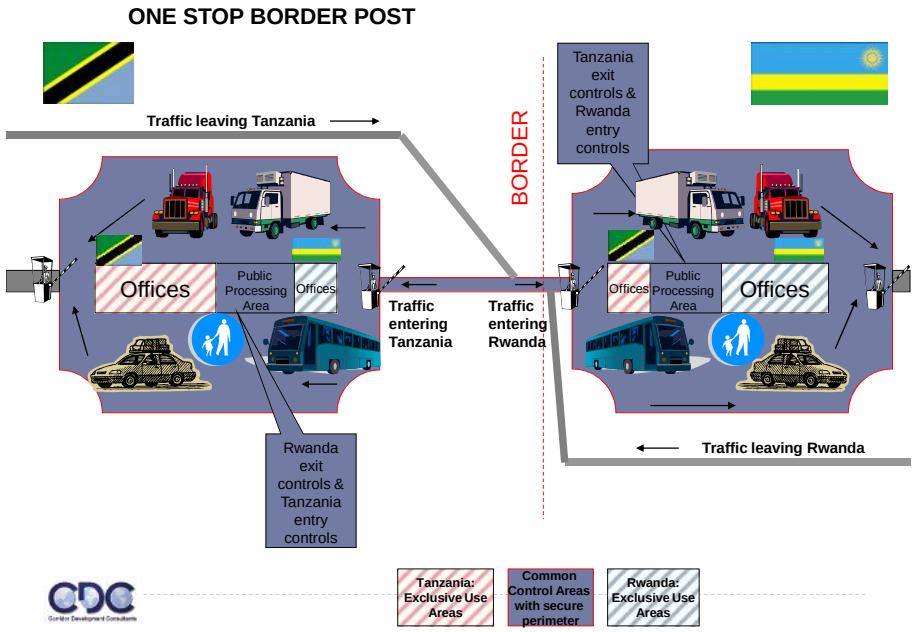


Figure 4: Schematic of the operational setup of a juxtaposed border post
Source: EAC. One Stop Border Posts Policy Paper for EAC, 2010

The issue of how many and where weighbridges will be placed at OSBPs need clarification. Two weighbridges are still permissible using the one for traffic flowing in one direction and the other for the traffic flowing in the opposite direction. The ideal situation is then to have one weighbridge on either side of the road, but are the vehicles to be weighed before or after the Customs? If only upon production of a weighbridge printout certificate would the driver's documentation be processed by customs officials, the weighbridge would need to be before the customs. The customs procedures would however need to be amended such that customs would require the driver of any commercial vehicle to produce a Weighbridge Printout Certificate as a basis for processing of his documentation for crossing the border. The rational approach, which considers existing situation, would be to allow the placement of the weighbridge in whatever sequence provided the information is directly accessible from the Customs.

The OSBP can also be operated successfully in cases where the weighbridge is not located in close proximity to customs. In such a situation, the weighbridge could be operated many kilometres away from the border. Although there is a possibility that after weighing and being issued with a weighbridge clearance certificate the driver may pick up additional load and still be cleared by customs, the risk of this occurrence should not detract from the principle of operating the system which, on balance, is likely to provide more benefits than dis-benefits.

The weighbridge operating hours need to be synchronized with customs. While operating hours between 06.00 and 22.00 hours have been found to be largely acceptable, a 24 hour operation is recommended to avoid any inconveniences. In addition, the USDA/East African Transportation Management and Harmonization of Standards Workshop held in Arusha on 10th - 12th September 2001 agreed on the harmonization of working hours between various departments involved in the clearance and handling of goods within the region. A 24 hours operation was recommended for all departments involved in the handling of transit goods.

4.8.3 Weighbridge data management software

Wayware software

The Wayware software is developed by the Mastech Pty Ltd which is a supplier of weighbridge integration software and weighing/process control solutions in South Africa. Mastech's software development factory in Pretoria can configure and customize your system to fit your unique requirements. The Weighing System is a software product aimed at supporting various weighing requirements. An optional function within the standard Weighing System includes the importation of the required "static" information from files prepared by another system. A number of user defined fields are available and the user can utilise this facility to add own fields to the system that can be captured as required. A Wayware software screen is shown in Figure 5.

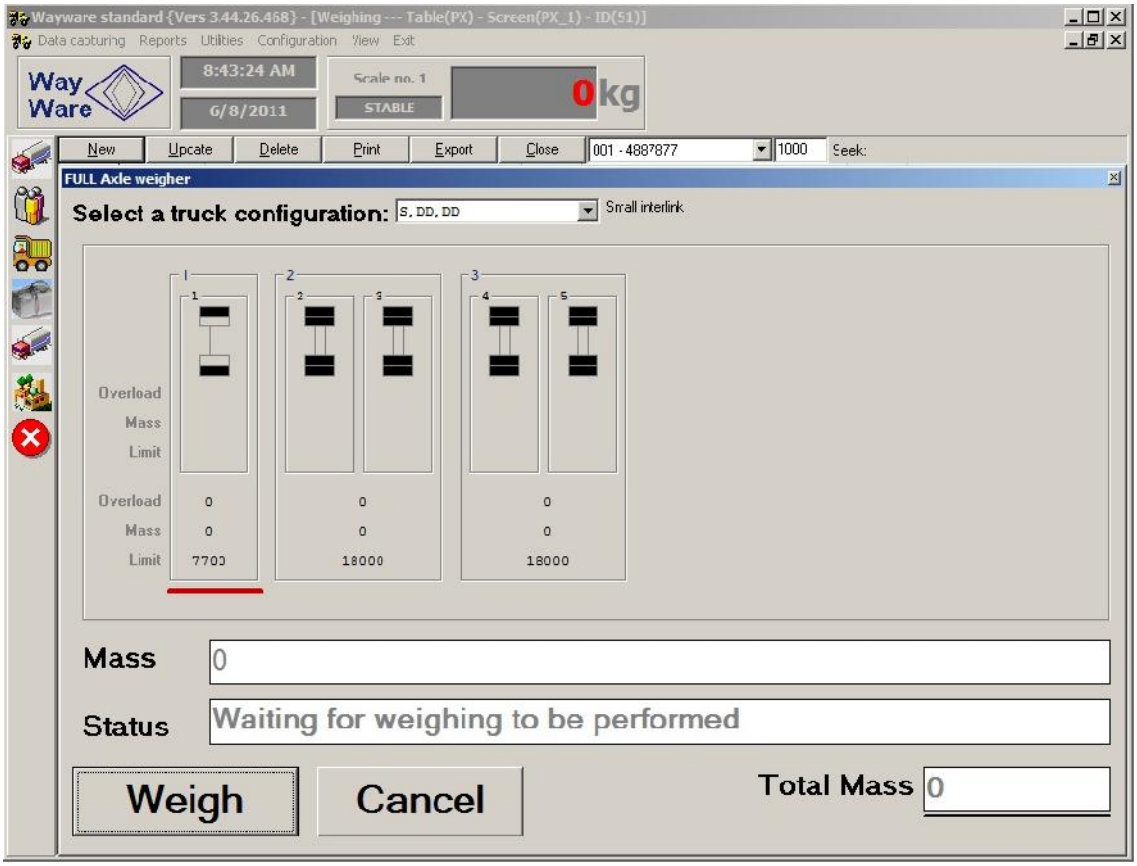


Figure 5: A Wayware software screen

The Axle System is a software product aimed at supporting axle weighing in a number of different modes. The standard product provides the following functions (not all may be required by a particular application):

- Registering and maintenance of various "static" information groups, such as: vehicles, drivers, customers and products.
- Weighing of axles.

- Uploading or downloading of information from an ERP or other system

At the completion of the weighing process an axle weighing ticket is printed. The standard Axle System provides an export mechanism where the completed transactions are formatted according to one of the available options and recorded in a file. The target system can then read the information from this output file for further processing. An import/export mechanism is also provided for the exchange primarily of “static” information.

Features Summary

- A standardised package based on commercial off the shelf products
- It can be interfaced to all types of weighing equipment
- Various standardised reports
- User defined fields
- Backup and restore
- System recovery
- Security
- Error / log reporting
- Low cost
- High availability (24x7)

The Axle System software is executed on one or more standard PC workstations. These workstations are interconnected on a Local Area Network (LAN) and share a database. A controlling workstation is connected to the various devices that need to be controlled/monitored. It runs a Graphical User Interface (GUI) on a Windows platform and has been constructed such as to allow the easy configuration of options and the introduction of new functions.

The standard Axle System can be extended to accommodate other customer requirements such as:

- Automated weighing: this usually involves the use of smart cards as a means of identifying the driver.
- Access control.
- Security cameras.
- On-line interfaces to other systems.

Based on the nature of how data have to be shared among the weighbridge stations, and how, which and where various information has to be depicted and shared, the packaged solutions software such as Wayware (Weighcomm and Weighman) may have limitations on customization.

iWEIGH software

iWEIGH Solutions® offers companies integrated Weighbridge Software Solutions for any commercial weighing application. It is widely used in the UK, US and Australia. It is a database dependent software that uses sqlserver for data storage which gives the flexibility required for data mining process and data sharing. However, some of its products are rather specialized made on the pre-assumed requirements e.g. catering for forestry, landfill and quarry weighbridges.

Weightron's WinWeigh Connect

Weightron's WinWeigh Connect is a dedicated, user-friendly, Windows-based weighing package, which opens up new dimensions in the management of weighing data. The system, which is already operational at over 250 sites across Europe, automates weighbridge operations, allowing applications at single and multiple sites to be linked to a centralized location, which may even be in another co-untry. Unlike most competitive packages, which are dedicated to a single manufacturer's equipment, WinWeigh can be used with any make of weighing equipment and ancillary operational devices. This makes it suitable for national/regional weighbridge operators who operate different manufacturers' weighbridges but want to bring them together under one operating system. Being easy to use and powerful, this software tool turns a standard application into a custom-made weighbridge program extremely quickly, and a typical system can be built up in logical steps from a straightforward flow chart.

It can be easily integrated with existing business systems, offering weighing data capture and administration, together with system-orientated statistics and reports. At the heart of the application is a powerful database module. Users can create their own tables, modify existing ones, set field validations and set index and sorting codes. There is a flexible import-export function for standard file formats and WinWeigh can connect to external databases including Dbase, Paradox, Excel and Sybase. The built-in driver library offers over 50 device drivers for controlling peripheral equipment including alphanumeric displays, keyboards and displays, card and key readers, scanners, vehicle recognition systems, speech synthesis (TTS), barriers and traffic lights. These drivers are comparable with windows printers and are therefore independent of the design and protocol of the peripherals.

WinWeigh provides fully configurable weighing screens, databases and processes, and no programming is needed for most bespoke modifications. If software upgrades or changes are needed, these can be carried out remotely via a standard web browser. The function keys and quick-search displays help the operator to fill in the weighing screen very rapidly, thereby minimizing waiting times for vehicles on the weighbridge and increasing throughput. As new national and European legislation is introduced, the requirement to maintain comprehensive company records increases significantly and WinWeigh allows the storage and distribution of critical information in a secure yet easy-to-access electronic format.

There is no doubt that Wireless (WiFi) interface technology is becoming more prevalent. WinWeigh already use the technology in smaller-scale applications and are now starting to explore its use in weighbridge installations. WiFi offers secure data transmission and equipment layout flexibility,

while removing the problems caused by damage to cables. The company is taking a leading role in the implementation of these developments in weighing systems.

TRAFMAN

Trafman is data-based PC software that allows one to program, recover and process files from a variety of sources. TrafMan enables one to manipulate, factor, edit, combine and convert any data file. One can also print the file in a wide variety of report formats. TrafMan software was specifically designed to help you manage and store data from thousands of sites, year after year, decade after decade, without using up volumes of hard drive memory space.

Magna FS had in 2004 installed its TRAFMAN™ Weighbridge and Contravention Module at 12 weighbridges in Namibia. The 12 weighbridges are mostly located at the ports of entry into Namibia and other strategic locations on the country's main routes, which are all linked to a central server in Windhoek by means of a Wide Area Network. This configuration allows online monitoring of all weighing operations at the head office of the Roads Authority in Windhoek and consolidated reporting across all weighbridges.

The Weighbridge and Traffic Contravention Modules of the TRAFMAN™ system are also used at 13 weighbridges in KwaZulu-Natal. They communicate with and control the operation of legal (static) scales, and can be integrated with weigh-in-motion equipment at the roadside. These modules have been especially useful for law enforcement control of the overloading of heavy commercial vehicles.

There are also other African countries such as Botswana where this software has proven to work effectively. It is therefore possible, with some customization and programming, to use this software to integrate and share overload data among the weighbridge stations in the region.

Summary observations

It is apparent that there is scope for computerising all weighbridges and linking them to a central station for overall management purposes, including compilation of a variety of statistical information. A number of proprietary Weighbridge Data Management Systems are available for such purposes; they provide facilities for data storage, statistics on axle loads, analysis, identification of habitual overloading offenders, identification of critical goods and goods destinations, monitoring and comparison of axle load measurements, etc. The outputs of such systems would be useful to a variety of end users both within and outside Roads Department. The data management system used in KwaZulu Natal in South Africa, which is based on TRAFMAN, with similar reporting formats as recommended for use in EAC in section 3.7.2 and Appendix 2 of this ANNEX offers the greatest potential for customization and adoption. Off-the-shelf/proprietary software are developed on pre-assumed requirements and may not meet the needs of data integration and sharing within the region. Alternatively, a software company that can build database dependent software that can manage and share data in the wide area network (WAN) based on the situation analysis approach can be engaged.

4.9 Recommendations for the Interconnection of Weighbridges and Information Sharing

Recommendations

- *There shall be established an EAC Overload Control Management System (OLCMS) for data storage, analysis and sharing between the various weighbridge stations on the EAC road corridors. The system shall be hosted at a centre to be decided by the EAC.*
- *There shall be internet connection at each weighbridge station and a Local Area Network (LAN) within the station. Wireless connection through satellite dishes is recommended for weighbridges located in remote areas. Power should also be guaranteed using strong UPS and consideration should be given to solar power in isolated areas.*
- *Each station should be part of the networked computers of other stations within the region forming a Wide Area Network (WAN).*
- *In order for all data in each weighbridge to be accessible, a server-based system is recommended where data accumulated at each weighbridge site is replicated at the central server on an ongoing basis. The input data as opposed to calculated data will be replicated for analysis centrally.*
- *Data storage at each weighbridge station should be database driven. Weighbridge technologies that support data storage through database technologies such as SQLServer and MySQL are preferable.*
- *Based on the type of system being recommended, customization of TRAFMAN weighbridge program as used in Kwa Zulu Natal is recommended in place of developing a completely new program. Professional database analysis and design will also be required.*
- *A network design will be needed that will depict how the network backbone should be; what data should be shared, secured means of data communication, how should the authentication be, etc.*
- *When new border facilities are being planned, provision should be made for not only locating the weighbridge within the customs area but, also, for sharing the weighbridge facility between the adjacent countries in a one-stop border post (OSBP) arrangement.*
- *Two weighbridges are permissible at the OSBP using one for traffic flowing in one direction and the other for the traffic flowing in the opposite direction.*
- *Weighbridges should be electronically linked to Customs at border posts so that outputs can be electronically viewed at Customs through access to the Overload Control Management System.*
- *All offices handling transit goods such as weighbridges, customs, and immigration should be operational 24 hours, 7 days a week.*

5 PREPARATION OF LEGAL INSTRUMENT FOR IMPLEMENTING OVERLOAD CONTROL

5.1 Introduction

The revised ToRs for Thematic Area No. 5 have been highlighted in the previous parts of this draft final report.[20] One of such ToRs, for the purposes of this Part was to "prepare an EAC legal instrument to be used by the Partner States in implementing overload control regulations. Such an instrument shall be either a Protocol or a regional Act depending on which option would be most appropriate". The purpose of this Part therefore, is to propose a legal instrument on overload control without losing sight of the specific matters contained in the revised ToRs, namely, development of a common training curriculum for weighbridge personnel; set up uniform weighbridge print out certificate and overload reporting formats across EAC region; and propose a framework for interconnectivity of weighbridges in the region with a regional data centre for monitoring the performance of weighbridges and storage of data.

It is common knowledge that PADECO Co. Ltd have equally made an invaluable input in this area by drafting a proposed EAC Regional Legal Instrument on Management of Vehicle Loading.[21] The legal instrument proposed to be developed here will therefore try to fill in gaps, if any, which were left out by the PADECO study in order to come out with a comprehensive document that addresses all areas connected with motor vehicle overloading and weighbridges in particular in the region.[22] It should be pointed out that overloading and weighbridges are both sides of the coin. A legal document cannot address one side without unnecessarily considering the other.

5.2 Towards Inter-regional Harmonisation

The drive towards harmonization of motor vehicle over load control in the Community and other similar regional settings, such as, COMESA and SADC is also underscored in several documents developed by the two organisations. For example the SADC Memorandum of Understanding on Vehicle Loading (MoU) and, in particular, Article 3 commits the Member States to agree to the harmonized legal load limits contained in Schedule A to the MoU.

As for regional network of weighing stations, Article 5 of the MoU partly provides, thus:

[20] At the commencement of this Project BICO was required to, among other things, "Review existing laws and regulations concerning overload control and propose areas for harmonization and improvement to be similar across EAC, COMESA and SADC regions."
It seems this task was later taken over by a sister study conducted by PADECO Co. Ltd, see Study for the Harmonization of Vehicle Overload Control in the East African Community, Final Report, July 2011 particularly chapters 2 and 7 titled "Review of Existing Laws and Regulations and Weighbridges and their Operations and Management" respectively.
[21] This legal instrument which is in form of an EAC Act was also tabled before the 3rd Task the Force Meeting to Review Draft Report Based on the Results of the 2nd Task Force Meeting, 2nd Stakeholders Workshop and Extraordinary Task Force Meeting of Stakeholders From Partner States which was held at Arusha on 15 July 2011. PADECO developed this instrument pursuant to their recommendation made in the Interim Report, of April 2011, see Chapter 8.3 of the Report.
[22] An inquiry by telephone with the EAC Secretariat emphasized on the BICO study to look further into the development of legal provisions related to weighbridges. The clarification by the EAC Secretariat at the 3rd Task Force Meeting required BICO to add missing data or criteria in the proposed instrument.

(i) Member States agree to ensure the effectiveness of overloading control on a regional basis through the development of a regional network of weigh stations which is effective and sustainable in respect of both domestic and international road traffic.

(ii) Member States agree that the weighing stations forming part of the regional network must be strategically and equitably located on the Regional Trunk Road Network.

(iii) Member States agree that in locating weighing stations, preference shall be given to the establishment of weighing stations in common control areas at border posts.

This Consultancy addresses the issues raised in the first two bullets above albeit at the EAC level while issues raised in the third bullet have already been dealt with by another study which culminated in the drafting of another proposed legal instrument entitled the East African Community One Stop Border Posts Act, 2010.[23] This proposed Act according to the Study is intended to assume supranational legal status which in terms of Article 8 of the EAC Treaty shall have precedence over similar national laws on matters pertaining to its application (i.e. border posts).[24]

At the level of the Community, there are several provisions in the EAC Treaty which implore Partner States to move towards harmonization of their regulations on overload control and weighbridges. Article 90 on Roads and Transport is of particular importance for it requires the Partner States to, among other things:

(i) adopt common rules and regulations governing the dimensions, technical requirements, gross weight and load per axle of vehicles used in the trunk roads within the Community;

(ii) adopt common and simplified documentation procedures for road transportation within the Community and harmonise road transit charges;

(iii) exchange information and experience on issues common to roads and road transport within the Community.

5.3 The Approach towards Harmonization

Transport facilitation in the EAC region can only serve its purpose if it is based on harmonized legislation, institutions and practices. Despite consistent efforts and achievements over the years by the Community since its establishment, significant differences continue to exist between countries in terms of their legislation, institutional set up and practices. This is commonly pronounced in areas like overload control and weighbridge management. Differences in operational standards normally lead to lack of traffic and transit rights and barriers to the movement of goods and people, especially to land locked countries, hence, a negative impact on the countries' economies.

[23] The Study is titled "One Stop Border Posts Policy Paper for the East African Community" which was presented by the EAC Secretariat to the Council of Ministers, May 2010. The Study was undertaken by the Corridor Development Consultants (CDC) of Namibia.

[24] It is pointed out in item 9 of the Paper presented to the Council of Ministers that national border laws which are existing or proposed in the EAC Partner will remain in force and unaffected by the EAC OSBP Act to the extent that they are in sync with the provisions of this Act.

The approach towards harmonization of transport related legislation at international or regional level can be pursued in three ways, namely, legal transplantation, legal harmonization and legal unification.[25]

(i) Legal transplantation

This is a process whereby laws and legal institutions developed in one country are then adopted by another. This method or approach was commonly applied during the colonial period whereby laws applicable in the colonial master states were transplanted in the colonized countries. The three Partner States of Kenya, Tanzania and Uganda went through this experience during England's occupation of the three states. The same can be said of Burundi and Rwanda during the French occupation. However, it is argued that legal transplantation is not very common in transport, mainly, because transport is one of the areas where national specificities are very present. Naturally, it is a method which cannot be recommended in this study.

(ii) Legal harmonization

This is a process in which a group of countries agree on a set of objectives and targets and let each country amend its internal laws to fulfill the agreed objectives. In transport, a typical example of this type of harmonization could be the setting and implementation of conditions for entry into the market by transport operators, especially of the financial standing criterion. The countries can agree on a minimum fixed sum to be in possession by every transport operator but leave it open for each country to decide if, to satisfy this requirement for authorization, this amount should be possessed by the operator in cash, bank guarantee, assets or other forms.

This method is not recommended here in view of the developments made so far that, the legal instrument in respect of overload control in the Community has been endorsed by the Task Force coupled by the fact that the trend now in the Community is to move towards uniform Acts of the Community. This argument is also under scored in the CDC Study on One Stop Border Posts Study.

(iii) Legal unification

It is a process in which a group of countries decide to replace their national rules and adopt a unified set of rules agreed at the interstate level. In transport, this type of harmonization is particularly used in the case of technical standards, such as, setting regulations for motor vehicle construction, pollution norms, vehicle's weight or dimensions, as well as, in document, for example, driving licences, vehicle's technical inspection documents, weighbridge documentation etc.

This is the approach which the Consultant recommends in the context of the TORs under this theme and, as mentioned earlier, given the fact that a draft legal instrument in form of an Act has already been endorsed by one of the organs of the EAC.

5.4 The Option: Protocol vs. an Act

According to the TORs the consultant was required to prepare an EAC legal instrument on overload control which shall be either a Protocol or a regional Act depending on which option would be most

[25] Generally these are the three methods which can also be used in harmonizing legislation in other areas other than transport laws. These methods (or approach) are advocated by the United Nations in a study "Towards a Harmonized Legal Regime on Transport Facilitation in the ESCAP Region" – Guidelines – New York, 2007. They are methods which the EAC can borrow from taking into account the objectives of the Community as pronounced in the Treaty.

appropriate. The debate on choice between a Protocol and an Act in our considered opinion should not be a critical issue for discussion at this stage.

First, the proposed legal instrument by PADECO Co. Ltd and which has already been endorsed or approved by the Task Force is in form of Act. In coming to this conclusion, PADECO made a thorough analysis of the advantages and disadvantages between a Protocol and Act given the nature of the subject which is to harmonise technical standards on overload control and weighbridges.[26] Secondly, the choice should be informed by the findings in another equally important study carried out by CDC (Pty) Ltd and their recommendations as contained in the Final Report, Study on the Legal Framework for Introducing One Stop Border (OSBPs) in East Africa and the Rusumo Post, of March 2010.[27] We do not think that these recommendations are not tenable in this particular study. The Consultant in this case therefore wholly supports the recommendation to develop an EAC Act on overload control and will proceed herein to make recommendations on adding provisions particularly on weighbridges in order to make the already approved instrument more self sustaining.

[26] See in particular item 8.2 on Choice of Modality in Chapter 8 of their Report. The discussion in this part also revisits international law and practice on treaty and bilateral making.

[27] In this Study the basic principles of Supranationality and subsidiarity of EAC Acts over national Acts or law are adequately discussed and justified and we find no reason to fault them.

5.5 Additional Provisions in the EAC Act

The provisions which are recommended here should be read together with the EAC Act proposed by PADECO Co. Ltd. In view of the fact that new sections are likely to be added, it follows that the PADECO instrument will necessarily be amended in terms of serialization of the sections while in others, new subsections will be created. No attempt is made to reproduce the whole proposed PADECO Act here except the titles and marginal notes in the Act in which we propose inclusion of new provisions. However, the title of the Act is reproduced in full.

Title

THE EAST AFRICAN COMMUNITY

ACT ON MANAGEMENT OF VEHICLE LOADING

No. …….. of 201…

Date of assent ……201…

Date of Commencement ……201…

An Act of the Community for the management and control of vehicle load.

Enacted by the East African [Legislative Assembly] and assented by the Heads of State.

Comment: The title has been reproduced verbatim from the PADECO instrument except for the words in the brackets which refer specifically to the organ responsible for enacting EAC Acts.

PART III: MANAGEMENT OF VEHICLE LOADING

6. *Obligatory Weighing of Vehicles*

7. *Exemption from Obligatory Weighing*

8. *Payment of Overloading Fees*

(1) …

(2) …

(3) [**Add new subsection on who should initiate civil action as follows:**]

Any Civil action contemplated in sub (2) of this section may be instituted in the name of the national road authority.

Comment: This addition is intended to clear the doubt on who should institute the civil action against a person who fails to pay the prescribed over-loading fee. Like the other provisions of this section, this subsection is also drawn from Regulation 6(3) of the Botswana Road Traffic (Vehicle Load) Regulations.

[*9 Conditions for Carriage of Abnormal or Awkward Loads*]

The whole of this provision as drafted by PADECO based on Sections 13 and 14 of the SADC Model Legislative Provisions should be included in the proposed Act to take care of carriage of abnormal and awkward loads.

Comment: In their Report PADECO says that they drafted this provision for consideration by Partner States pending the conclusion of the BICO Study. In view of BICO's findings in Thematic Area 1 on Standards and Specifications of this Study it is recommended that this section should be retained. The inclusion of the section in the Act also responds squarely to the TORs of this Study.

PART VIII: WEIGHING STATIONS, WEIGHING EQUIPMENT; AND WEIGHING OPERATIONS

26. *Power to Install Weighing Stations and Conduct Weighing Operations.*

27. [**Create a new section on interconnectivity of weighbridges at national and regional level as follows:]** *Interconnectivity of weighbridges*

27. (1) Subject to the provisions of section 26, in installing weighing stations on any public roads, national road authorities shall ensure that all weighbridges are networked at national and regional level and linked electronically to a national and regional data centre to facilitate sharing of information on overload control.

(2) The national road authorities shall agree on the technical requirements for interconnection of the weighbridges as contemplated in subsection (1) of this section.

Comment: This provision has been developed based on the recommendations drawn by the PADECO Study. There were no similar provisions in the SADC MoU on Vehicle Loading; the SADC Model Legislative Provisions or the Botswana Road Traffic (Vehicle Loads) Regulations.

28. *Authorization of Scales and Devices* [The earlier section 27 by PADECO should be renumbered section 28 in view of the introduction of a new section 27 on weighbridges connectivity]

29. *Certificate of Approval* [The earlier Section 28 by PADECO should be renumbered section 29 pursuant to creation of new section 27 above]

30. *Accreditation of Weighing Stations, Audit, and Random Inspections* [The earlier section 29 by PADECO should be renumbered section 30 pursuant to creation of new section 27 above]

31. *Weighing Operations* [The earlier section 30 by PADECO should be renumbered section 31 pursuant to creation of new section 27 above]

32. [**Add new section on Issue and Mutual recognition of print – out certificates as follows:**] *Issue and recognition of print-out certificates*.

32. *Print-out Certificates*

(1) An authorized officer operating a scale shall issue and provide the driver with a print out certificate as shall be prescribed in the Sixth Schedule.

(2) The driver of a vehicle to whom a print out certificate has been issued shall- (a) keep the certificate in the vehicle throughout the entire transport operation; and

(b) shall present such certificate upon demand to an authorized officer of any national road authority.

(3) A print out certificate issued by an accredited weighing station in any Partner State shall be recognized as valid for the purpose of carriage between and in transit the Partner States, but such recognition shall not exempt a carrier from the obligation to weigh the vehicle if directed by an authorized officer appointed by a national road authority under section 17 of this Act.

(4) Nothing in this section shall be deemed to prohibit an authorised officer appointed by a national road authority under section 17 from requiring a vehicle carrying a print out certificate contemplated in subsection (1) from being weighed in terms of this section if there are reasonable grounds to do so.

Comment: This section is mainly based on section 34 of the SADC Model Legislative Provisions and the style of drafting particularly of subsection (2) is influenced by Regulation 16 of the Botswana Road Traffic (Vehicle Loads) Regulations. The provision is intended to exempt the motor vehicle from acquiring additional print out certificates in subsequent weigh stations of Partner States which may be a time consuming exercise.

33. *Data Management* [The earlier section 31 by PADECO should be renumbered section 33 following the introduction of a new section 32]

34. [**Add a new section on data sharing between weighing stations at national and regional level] as follows:]** *Data sharing*

34. (1) Each national road authority shall ensure that each weighing station implements a data management and sharing system with other weighing stations in the respective Partner State and other Partner States comprising data on:-

(a) the number of vehicles weighed on a daily, weekly, monthly, quarterly and annual basis;

(b) details of vehicles weighed, including the owner and operator and registration number of the vehicle and trailer;

(c) particulars of overloaded vehicles and the frequency with which a vehicle or vehicles of an individual owner or operator are detected for overloading;

(d) the amount of overloading, by passing and other fees imposed and collected;

(e) fee collection rates;

(f) average compliance rates by vehicle category, owner, operator and vehicle origin and destination;

(h) such other information or data as may be prescribed in the Sixth Schedule.

(2) Each national road authority shall submit quarterly and annual reports collating data collected by all weighing stations in terms of this section to the body established in section 35 of this Act.

Comment: This section is based on Regulation 35 of the Botswana Road Traffic (Vehicle Loads) Regulations and it is intended to ensure that data collected at weighing station in a Partner State is also shared with other weighing stations in the respective Partner State and other Partner States. This is in compliance with the directive given to the Consultant by the Client. There is a difference between data generated in section 33 and 34 in that, data generated under section 33 shall be determined by a national roads authority while that under section 34 shall be common (statutory) to all weigh bridges in the Community and shared accordingly.

35. *Establishment, Composition ….of a Regional Vehicle Loading Advisory Committee* [The earlier section 32 by PADECO should be renumbered section 35 following the introduction of a new section on data sharing]

36. *Responsibilities of the Regional Vehicle Loading Advisory Committee* [The earlier section 33 by PADECO should be renumbered section 36 based on the grounds above]

37. *Meetings of the Regional Vehicle Loading Advisory Committee* [The earlier section 34 by PADECO should be renumbered section 37 based on the grounds above].

38. *Liaison with Other Regional Economic Committees* [The earlier section 35 by PADECO should renumbered as 38]

39. *Temporary Measures* [The earlier section 36 by PADECO should be renumbered as section 39]

40. *Extraterritorial Performance of Duties* [The earlier section 37 by PADECO should be renumbered as section 40 based on the grounds above]

41. [**Add a new section on training as follows:**] *Training*

(1) Every national road authority shall promote, through training, a high standard of professionalism amongst authorised officers, operators, drivers, consignors and consignees.

(2) The national road authorities from all the Partner States shall agree to:

(a) develop a common training curriculum and programmes aimed at promoting a common understanding of-

(i) the regulation and enforcement of vehicle loading;

(ii) the manner in which any goods may be loaded and carried on a vehicle, including driving practices;

(iii) weighing practices and procedures; and

(iv) any other matter as may be included in the training curriculum and as revised from time to time.

(b) share existing training facilities and investigate the feasibility of establishing a regional training centre;

(c) harmonize training programmes based on the common training curriculum bearing in mind the need to ensure adequate levels of expertise and professionalism;

(d) co-ordinate human resource development policies and programmes by developing a regional plan for the transfer of knowledge, skills and technology;

(e) provide for the mutual recognition of qualifications if the training was done at an institution other than the regional training centre and provided the common training curriculum was followed; and

(f) encourage practical on-the-job-joint training.

Comments: This provision is mainly drawn from the SADC MoU on Vehicle Loading and it is intended to give legal force to matters related to training axle load control in the region as required by the ToRs.

42 *Dispute Resolution* [The earlier section 39 by PADECO should be renumbered section 42 due to the introduction of a new section on training]

43. *Regulations* [The earlier section 39 by PADECO should be renumbered section 43 on the grounds above]

44. *Act to take Precedence* [The earlier section 40 by PADECO should be renumbered section 44 on the grounds above]

45. *Requirement of Partner States to conform their National Laws* [The earlier section 41 by PADECO should be renumbered section 45 on the grounds above]

Schedules

Sixth Schedule: Particulars of a Print out certificate

APPENDIX 1: SYLLABUS FOR THEORETICAL TRAINING OF WEIGHBRIDGE STAFF

MODULE 1: Background to REC, Regions Transport Corridors, and Transport Environment ***AUDIENCE: All staff*** ***DURATION: 2 days***	
Topics	**Coverage to Include**
1.6 Introduction to EAC, SADC, and COMESA regions *1.7 Introduction to Road Transport Corridors and Transportation* *1.8 Meaning and Types of Overloading* *1.9 Effects of Overloading to Safety and Damage to the Infrastructure* *1.10 Controlling Overload* *1.11 Reasons for Measuring Vehicles Weight*	• *Introduction to EAC, SADC, COMESA region economic communities (REC)* • *Economic importance of RECs* • *Transport corridors in RECs* • *Importance of road transport sector* • *Basic principles of road design* • *Definitions of overloading by axles and by GVM* • *Effects of overloaded vehicles to the pavement and bridges* • *Why transporters overload* • *The basis of pavement design and the damaging factor* • *Road safety* • *Limiting wear/tear of the road* • *As an input to pavement and bridges design* • *As legal evidence for loading vehicle above regulations*

MODULE 2: Legislations and Regulations on Overload Control **AUDIENCE: Law enforcement and operational staff** **DURATION: 2 days**	
Topics	**Coverage to Include**
2.1 Legal terminologies and definitions 2.2 Road Traffic and Transport Acts and regulations on Overload Control (Country specific) 2.3 Weights and Measures Act 2.4 Role of the Police	• Terminologies and regulations relating to overload • Prevailing Acts and Regulations (country specific) • Application to apply various clauses and regulations and how they fit together • Power of the police • Applicable presumptions and their implications • Application of the tolerance margins

MODULE 3: Vehicles Combinations, Axle Configurations, and Dimensions **AUDIENCE: Management and Operational Staff** **DURATION: 1 day**	
Topics	***Coverage to Include***
3.1 Different Types of Vehicles Combinations and Axle Configurations 3.2 Vehicles Dimension Limits 3.3 Vehicle Dimensions 3.4 Reasons for Restricting vehicle Standards 3.5 Standards and Regulations in EAC states	• Definitions and terminologies in vehicle dimensions and combination • Legal limits on vehicle dimensions • Trailer types, and different types of vehicles combination • Effects of each dimension on road infrastructure and vehicle safety • EAC laws and regulations on maximum limits on vehicle dimensions • EAC laws and regulations on restricted vehicle combinations and axle configurations

MODULE 4: Weighbridge Equipment and Traffic Management Centers **AUDIENCE: Management, Maintenance, and Operational Staff** **DURATION: 3 days**	
Topics	***Coverage to Include***
4.1 Types of Weighbridge Equipment 4.2 Types of Traffic Management Centers (TMC)	• Types of weighbridge scales by procedure of measuring (fixed, mobile, static, dynamic, axle, axle unit, and multi-deck) • Types of weighbridge scales by technology (mechanical, electromechanical, hydraulic, analogue, digital, etc) • Limitation of different types of weighbridges by procedure and technology • Portable weighing/screening equipment • Limitations of portable scales • Maintenance and calibration requirements • Applicable standards, verification checks and requirements • FTCC, TCC1, TCC2, and LCC layouts and appropriateness with respect to traffic volume • HSWIM, LSWIM equipment

MODULE 5: Screening and Weighing Operations **AUDIENCE: Management, Maintenance, and Operational Staff** **DURATION: 2 days**	
Topics	***Coverage to Include***
5.1 Vehicles Screening 5.2 Weighing Procedure 5.3 Units and Units Conversion 5.3 Procedure for Releasing Legally Loaded Vehicle 5.3 Procedure for Overloaded Vehicle 5.4 Procedure for Special and Abnormal Loads 5.5 Procedure to Unload Cargo	• Screening of vehicles (aim, types, using devices, visual) • Weighing procedure (axle, axle unit, and GVM) • Different weight and length unit systems and conversions to each other • Calculations of overloads (forms, readouts, max dimensions, axle loads, GVM, combination mass, overload fee structure and bridge formula) • Releasing of legally loaded vehicle • Dealing with overloaded vehicle (charging, load adjustment, arrest of driver and seizure of vehicle for severe overloads) • Dealing with moving loads (liquids, animals) • Dealing with special loads (sealed containers, perishables, hazardous) • Dealing with abnormal loads (Dimension wise, mass wise, permits, weighing procedure) • Information plates and signs on Vehicles and their interpretation • Unloading of overloaded vehicles

MODULE 6: Administrative and Court Prosecutions **AUDIENCE: Management, Law enforcement, and Operational Staff** **DURATION: 1 day**	
Topics	***Coverage to Include***
6.1 Administrative System 6.2 Procedures for Prosecution in the Court	• Categorizing vehicle after weighing • Fees • Fee schedules and payment procedure • Penalty for habitual offenders • Prosecution of road traffic cases • How court functions, giving evidence in court, criminal/civil cases, and arrest procedures • Handling of properties of accused • Administrative appeals • Court appeals

MODULE 7: Introduction to Weighbridge Software **AUDIENCE: Management, and Operational Staff** **DURATION: 1 day**	
Topics	***Coverage to Include***
7.1 Structure of Weighbridge Software 7.2 Customizing and Updating Software 7.3 Troubleshooting	• Types of weighbridge software • Capturing vehicle data • Capturing scale readings • User access levels • Printouts • Maintenance of software and updating pick-list for data recording • Troubleshooting

MODULE 8: Environment Pollution, Workplace Safety and Professionalism. **AUDIENCE: All Staff** **DURATION: 2 days**	
Topics	***Coverage to Include***
8.1 Environment Pollutants from Vehicles 8.2 Cargos that are Hazardous and Dangerous to the Environment 8.3 Types of Fires and Fire Extinguishers 8.7 First Aid Procedures 8.8 Occupational Health and Safety Practices 8.9 Customer service, Work Ethics and Professionalism	• Types of environment pollution and recommended standard limits by WHO, etc,. • Likely hazards at weighbridge stations • Chemicals and pesticides • Dangerous or hazardous substances • Stationary and moving equipment, parts and materials • Noise, light, Exhaust fumes • Types of substance spillage, fire hazards, and first aid procedures • Safety and welfare as an employee of weighbridge station • Types of corruption and how to deal with corrupt transporters • Legal obligations and duties of weighbridge staff • Work ethics • Customer service etiquettes

APPENDIX 2: UNIFORM WEIGHBRIDGE PRINTOUT CERTIFICATE AND OVERLOAD REPORTING FORMATS

THE EAST AFRICAN COMMUNITY

COUNTRY*

WEIGHBRIDGE PRINTOUT CERTIFICATE

Weighbridge Station:				Region:		Date:	Time(hrs):
Owner of Vehicle:							
Address of Owner of Vehicle:							
Types of Cargo:				Origin:		Destination:	
Transport Permit No.#:							
Vehicle Registration Nos.	Vehicle:			Semi trailer:		Trailer:	
Axle Configuration+:							
Axle No.	Axle Group	Load measured (Scale reading) (kg) (a)	Allowed Load (kg) (b)	Discretion Allowance (kg) ≤ 5% of (b) (c)	Adjusted Load (kg) (a - c) (d)	Overload (kg) (d-b) (e)	Overload Fee (currency) (From e)
1	Axle Group 1						
2	Axle Group 2						
3	Axle Group 3						
4	Axle Group 4						
5	Axle Group 5						
Sum of Axles - Fees (currency)							
Gross Vehicle Mass (GVM)							
Amount to be Paid^ (currency)							
Action Taken:							
Name of Weighbridge Operator:						Signature:	
Remarks:							

Notes:

* *Relevant country's name to appear here*

\# *For abnormal loads*

\+ *Axle configuration e.g.1.22 (2 axle groups), 1-22-222 (3 axle groups), 1-22+2-22 (4 axle groups)*

^ *Higher of either sum of axles or GVM fee*

Figure A.1: Recommended uniform weighbridge printout certificate for EAC region

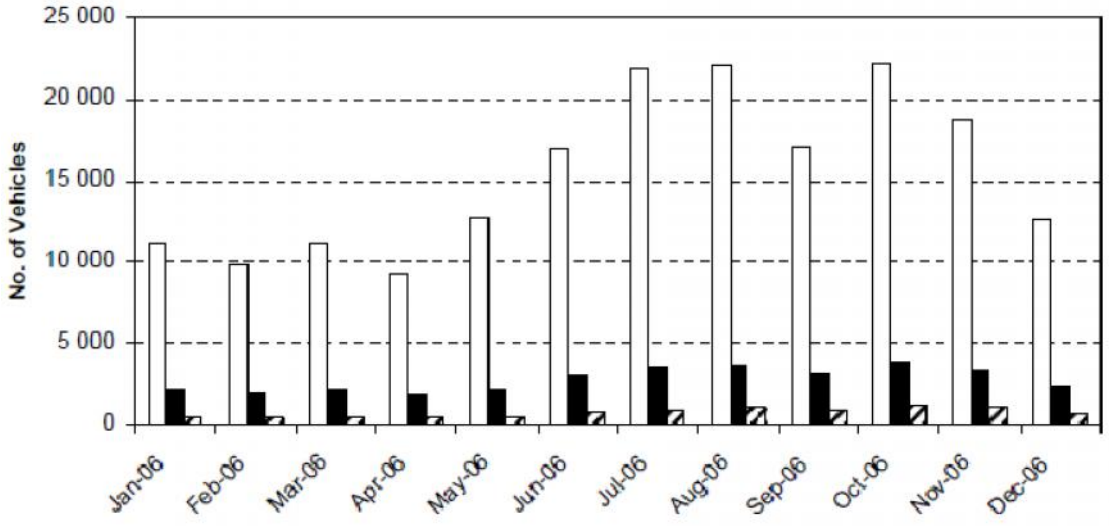


Figure A.2: Number of vehicles weighed, overloaded and charged per month

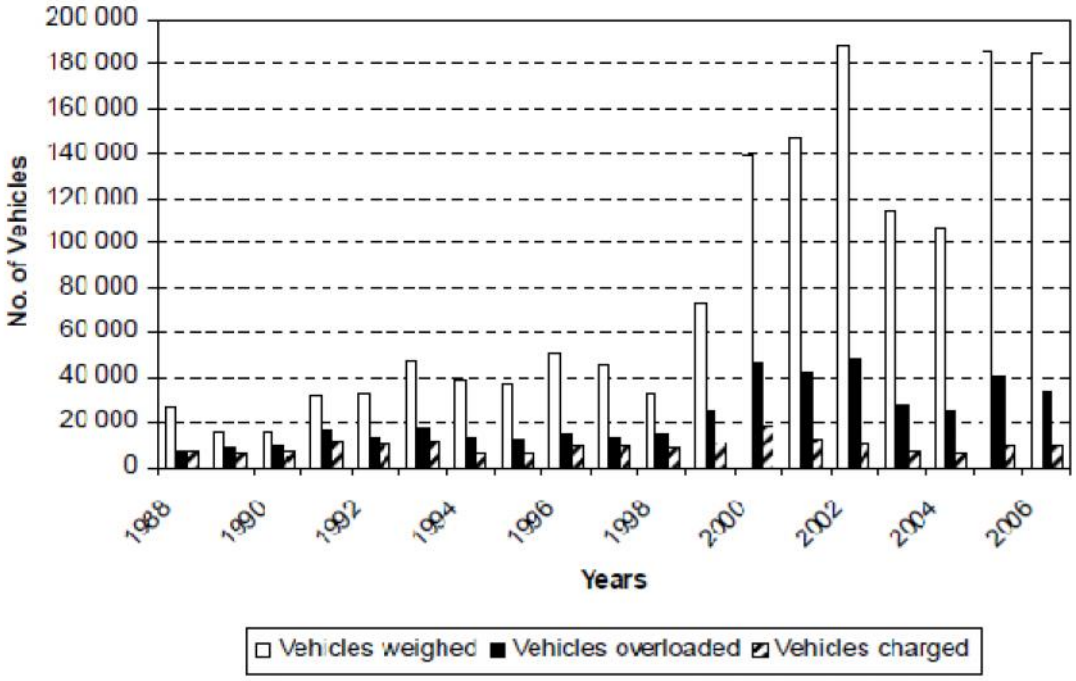


Figure A.3: Number of vehicles weighed, overloaded and charged per year

Table A.1: Number of vehicles weighed, overloaded and charged per year

	2004	2005	2006	% Change 2005 to 2006
No of vehicles weighed	106 619	186 488	185 710	- 0.4
No of vehicles overloaded	25 432	40 899	33 648	- 17.7
Percentage overloaded	24	22	18	- 17.4
No of vehicles charged	6 166	9 118	8 977	- 1.6
Percentage charged	5.8	4.9	4.8	- 1.1

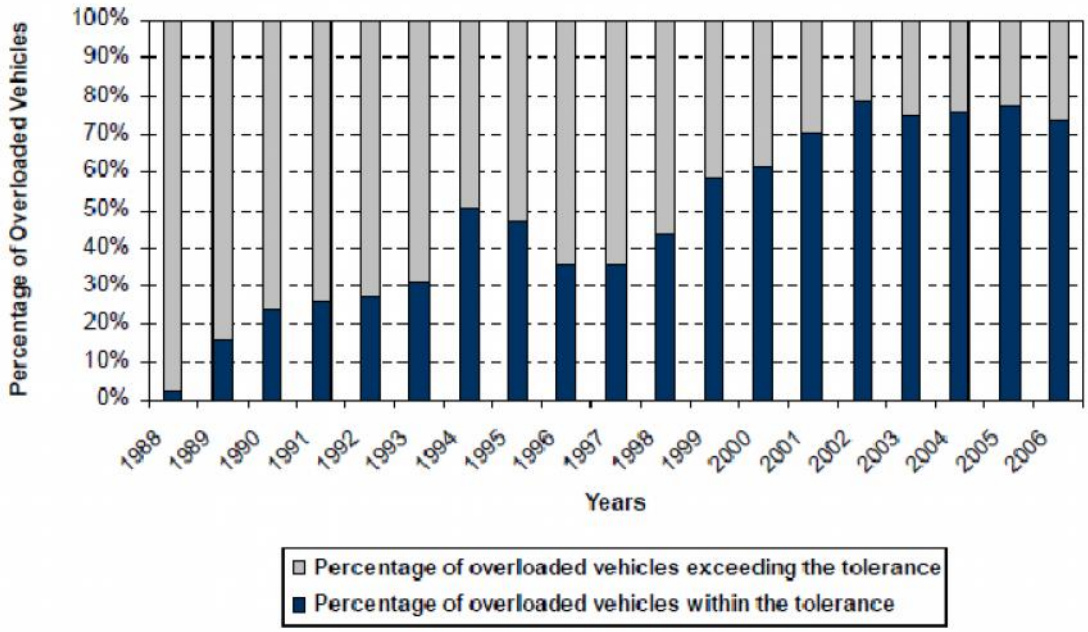


Figure A.4: Number of overloaded vehicles exceeding and within the tolerance per year

Table A.2: Individual weighbridge statistics per year

Locality	Number of Vehicles Weighed	LEGAL LIMITS			TOLERANCE LIMITS	
		Number of Vehicles Overloaded	Percentage Overloaded	Average Overload (kg)	Number of Vehicles Charged	Percentage Charged
Empangeni	610	255	42	1 974	158	26
Greytown	3 670	588	16	998	223	6
Groutville	5 530	1 263	23	1 112	452	8
Ladysmith	7 729	872	11	877	255	3
Marburg	7 211	1 602	22	972	686	10
Midway	58 245	8 811	15	805	1 624	3
Mkondeni	51 223	8 838	17	897	2 232	4
Newcastle	3 443	1 131	33	1 033	366	11
Park Rynie	7 577	1 746	23	876	612	8
Umdloti	13 706	2 462	18	932	557	4
Vryheid	2 185	730	33	1 373	317	15
Westmead	17 485	3 697	21	860	956	5
Winkelspruit	7 096	1 653	23	901	539	8
Total	**185 710**	**33 648**	**18**	**906**	**8 977**	**5**

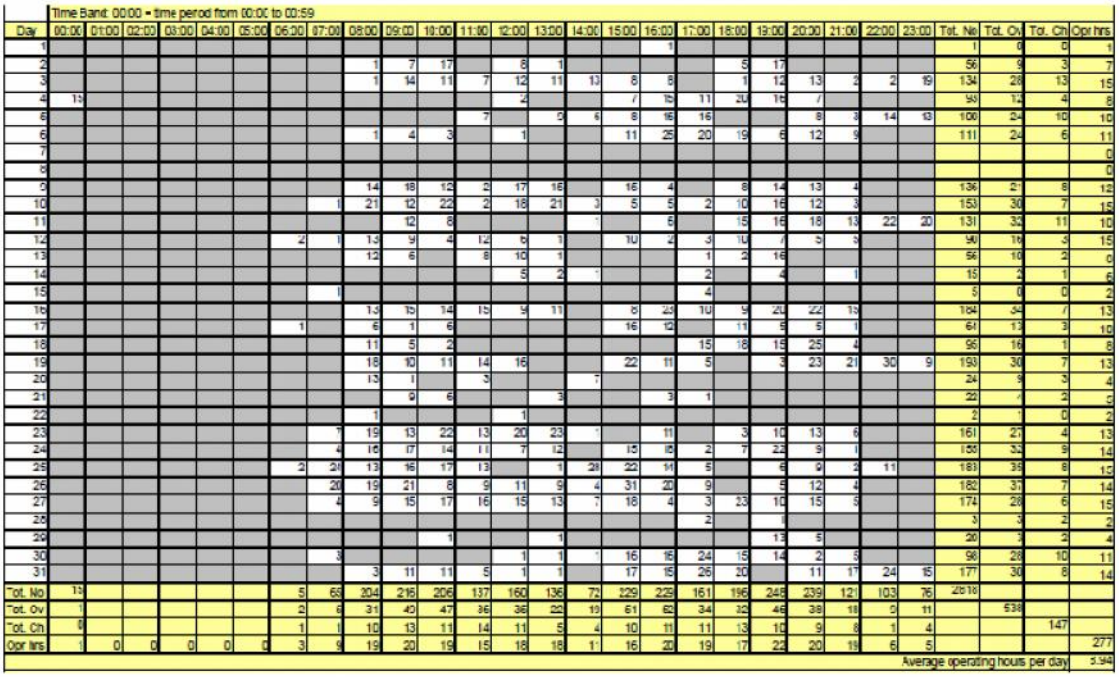


Figure A.5: Daily and hourly vehicle weighing statistics for one month

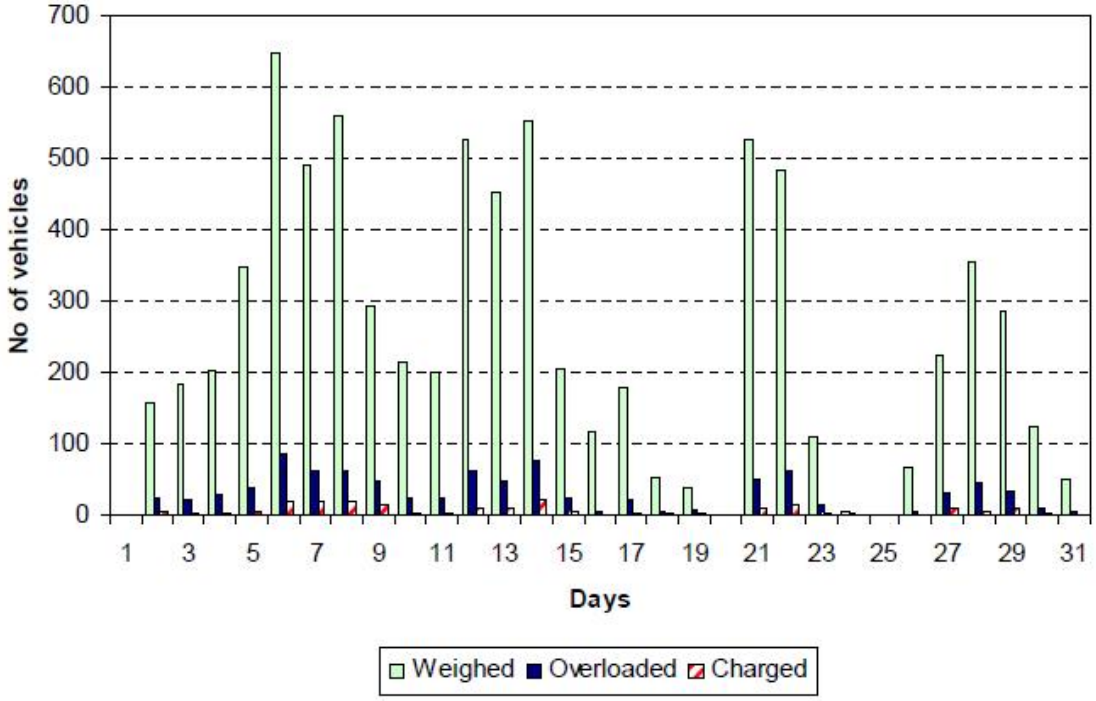


Figure A.6: Number of vehicles weighed, overloaded and charged per day during a month

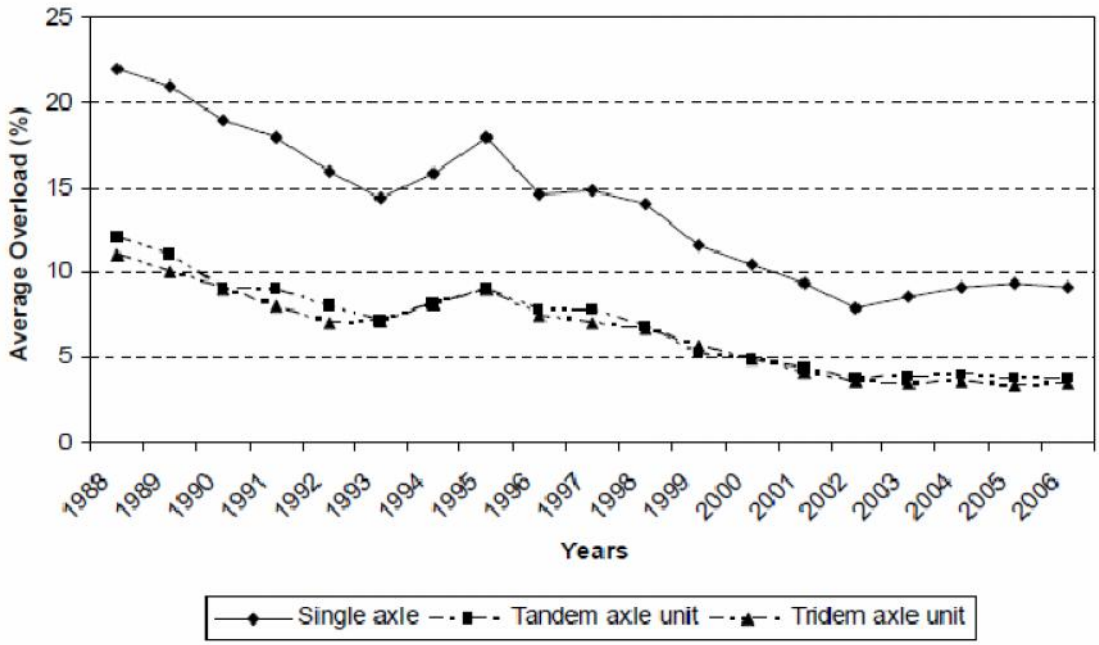


Figure A.7: Annual average overloads for single axles, tandems and tridems per year

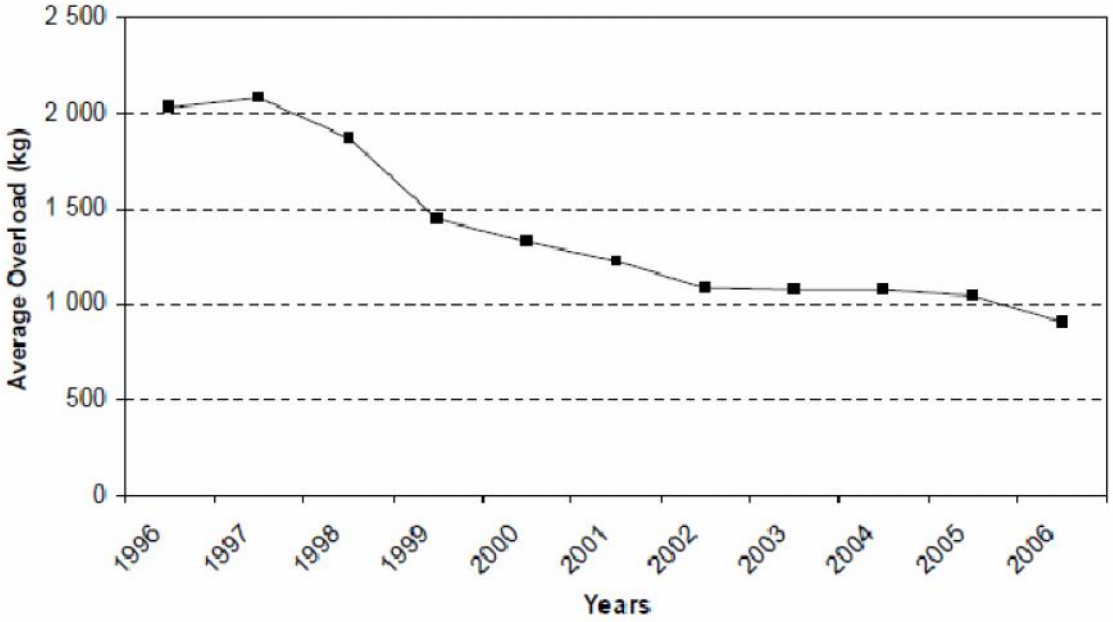


Figure A.8: Annual average overloads per vehicle per year

Table A.3: Ten maximum overloads in KwaZulu-Natal, SA in 2006

Regulation	Overload (kg)	Operator	Cargo	Locality
237	33 930	Company A	Logs	Mkondeni
240	27 860	Company B	Diesel	Midway
240	27 380	Company C	Goods	Westmead
239/37/41/42	24 160	Company D	Chemicals	Umdloti
239/37/4142	22 360	Company E	Scrap Metal	Midway
239/37/41/42	22 140	Company F	Stone	Newcastle
240	18 900	Company G	Sand	Westmead
240	16 380	Company H	Mixed Load	Midway
239(3)	15 600	Company I	Zinc	Mkondeni
240	15 220	Company J	Chemical	Marburg

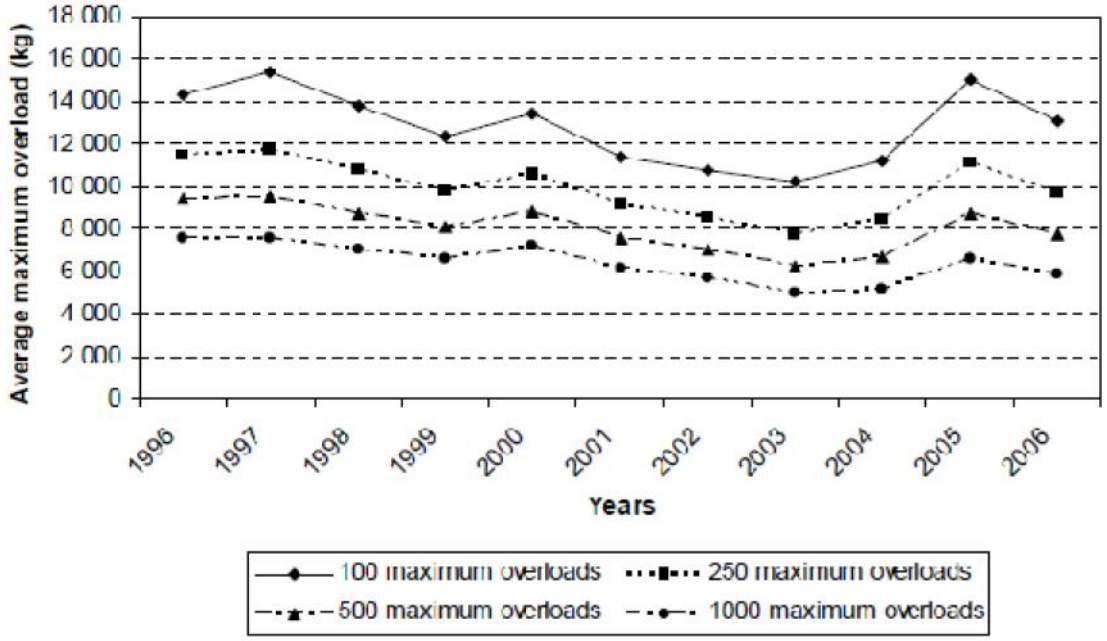


Figure A.9: Averages of maximum overloads per year

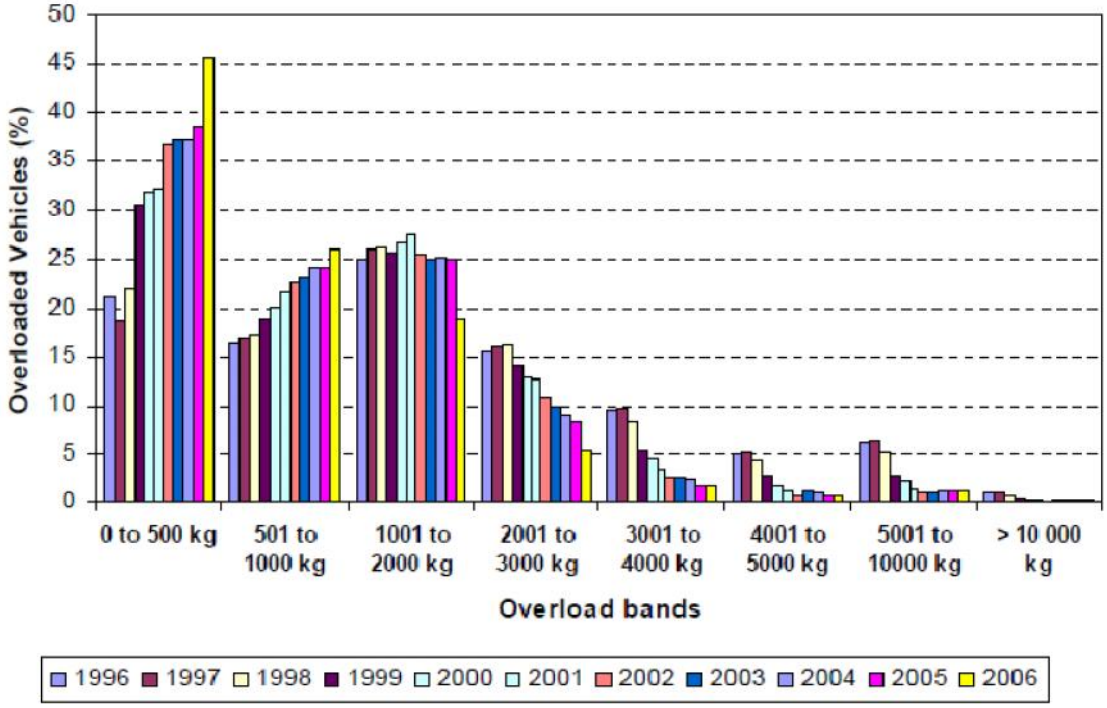


Figure A.10: Distribution of vehicle overloads (percentages) per year

Table A.4: Frequent offenders in terms of average overloads

Criteria: Minimum of 30 vehicles overloaded and 20 vehicles charged						
Operator name	**Average overload (kg)**	**Vehicles weighed**	**Vehicles overloaded**	**Percentage overloaded**	**Vehicles charged**	**Percentage charged**
Company A	2 230	169	40	23.7	27	16.0
Company B	1 645	126	39	31.0	23	18.3
Company C	1 266	870	98	11.3	33	3.8
Company D	1 183	736	140	19.0	38	5.2
Company E	1 154	196	102	52.0	38	19.4
Company F	1 148	832	397	47.7	100	12.0
Company G	1 112	447	237	53.0	25	5.6
Company H	1 033	275	143	52.0	24	8.7
Company I	1 018	1 402	166	11.8	58	4.1
Company J	1 011	283	197	69.6	44	15.5

Table A.5: Top eight vehicle classes weighed per year

Vehicle Class	**Number of Vehicles Weighed**	**Number of Vehicles Overloaded**	**Percentage Overloaded**	**Average Overload (kg)**	**Max GCM (kg)**	**Actual E80's (Ave) Overloaded veh only**
1222	73 884	16 720	23	865	67 940	6.9
123	45 097	6 657	15	898	64 540	5.6
11	29 221	3 416	12	881	27 060	1.8
12	8 713	1 666	19	936	32 580	3.5
122	8 304	1 076	13	1 214	55 640	6.1
112	4 747	460	10	910	40 760	3.6
113	3 100	1 308	42	954	53 800	4.8
1223	774	207	27	1 168	61 600	4.9

Table A.6: Number of vehicles weighed per vehicle class per year

Vehicle Class	2004	2005	2006	% Change 2005 to 2006
1222	42 273	73 991	73 884	- 0
123	20 575	42 204	45 097	+ 7
11	19 197	29 464	29 221	- 1
12	4 825	7 982	8 713	+ 9
122	4 796	8 269	8 304	+ 0
112	3 419	5 429	4 747	- 13
113	3 010	4 798	3 100	- 35
1232	2 345	3 772	774	- 79

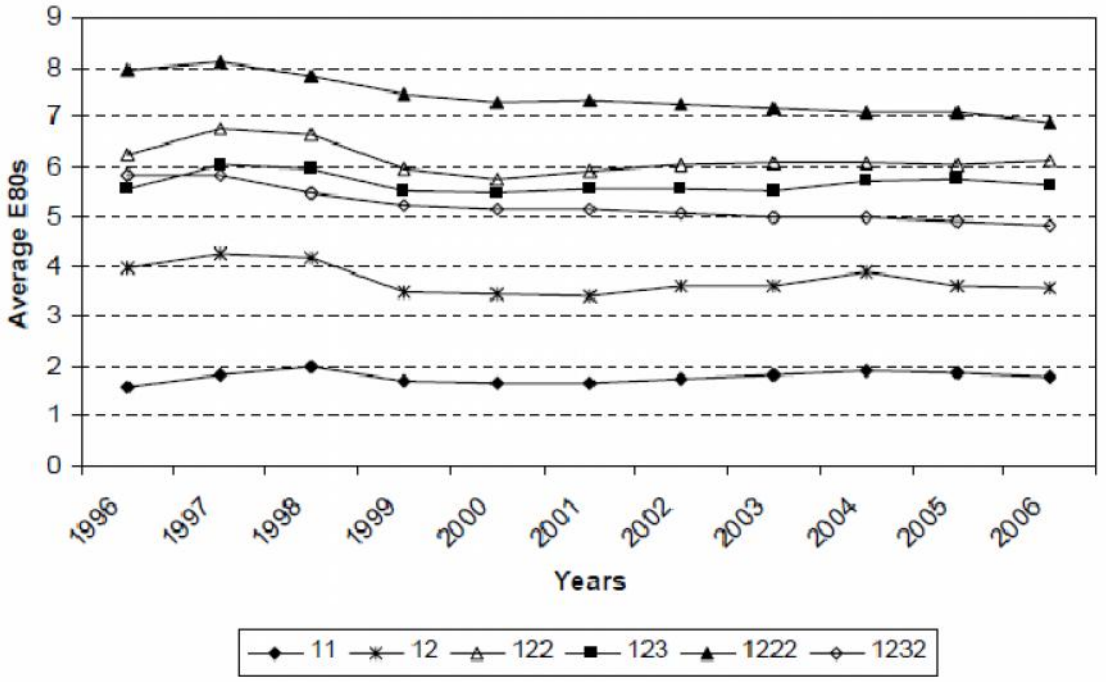


Figure A.11: Annual Average E80s per vehicle class (overloaded vehicles only)

Table A.7: Cargo statistics per year

Cargo	Number of Vehicles Weighed	LEGAL LIMITS			TOLERANCE LIMITS	
		Number of vehicles Overloaded	Percentage Overloaded	Average Overload (kg)	Number of vehicles Charged	Percentage Charged
Goods	75 855	11 766	16	716	1 686	2
Container	11 670	618	6	1 157	215	2
Mixed Load	10 927	1 497	14	709	172	2
Unknown Cargo	9 888	1 425	14	674	120	1
Containers	9 532	479	5	1 402	174	2
Dangerous Goods	4 884	1 091	22	624	106	2
Chemicals	3 822	944	25	610	78	2
Steel	3 387	619	18	964	215	6
Fuel	3 056	990	32	636	96	3
Logs	1 790	856	48	1 330	247	14
Sand	1 644	866	53	1 681	546	33
Coal	1 586	805	51	1 050	217	14
Vehicles	1 558	118	8	732	50	3
Paper	1 529	430	28	917	114	7
Timber	1 374	412	30	1 271	151	11
Coils	1 370	316	23	1 101	117	9
Cement	1 311	569	43	971	163	12
Cars	1 094	81	7	671	30	3
Meat	1 013	253	25	884	155	15
Oil	969	302	31	803	92	9
Machinery	887	115	13	1 463	56	6
Chemical	837	223	27	877	55	7
Bricks	794	215	27	1 425	128	16
Furniture	776	72	9	1 154	46	6
Boxes	761	61	8	979	24	3
Flammable Liquids	739	262	35	534	18	2
Petrol	671	232	35	618	23	3
Sugar	580	251	43	963	77	13
Maize	542	242	45	1 000	43	8
Soya	535	281	53	926	84	16
Beer	526	48	9	1 001	15	3
Milk	456	64	14	776	23	5
Rice	454	190	42	1 102	92	20
Tiles	415	116	28	1 233	78	19
Tanks	401	92	23	658	8	2
Lime	396	203	51	1 252	99	25
Pipes	385	47	12	1 162	28	7

APPENDIX 3: FRAMEWORK FOR INTERCONNECTION OF WEIGHBRIDGE FOR MONITORING, STORAGE AND SHARING OF DATA

Table A.8: Weighbridge inventory and growth trend in Tanzania

S/n	Zone	Region	Fixed Scales						Mobile scales		
		Period	≤ 2000	2001 - 2003	2004 - 2006	2007 - Dec 10	Number	Remarks	Location	Number	
1	Central	Arusha	Namanga				1		Makuyuni	1	
		Kilimanjaro	Himo				1		Varying	1	Faulty
		Manyara								0	
		Dodoma				Nala	1	Operational since March 09		1	
		Singida				Njuki	1	Operational since October 09		0	
2	Coast	Coast	Chalinze	Kibaha North			2		Mkuranga	1	
				Kibaha South			1		Varying	1	
						Msata west	1	Operational Nov. 10			
						Msata east	1	Operational nov. 10			
		Dar es Salaam							Kurasini	1	
										1	
		Lindi				Nangurukuru	1	Not Operational	Mingoyo	1	
						Mingoyo	1	Operational since August 08			
		Mtwara								0	
		Tanga	Horohoro				1		Varying	1	Faulty
			Kange				1				
3	S Highlands	Morogoro			Mikumi		1		Kihonda	1	
					Mikese	Mikese	2	Axle weigher - Sep 10			
		Iringa	Makambako				1		Tanangozi	1	
		Mbeya	Uyole		Mpemba		2		Chimala	1	
		Rukwa								0	
		Ruvuma							Bomba mbili	1	
4	Lake	Kagera	Nyakahura			Mutukula	2	Operational October 2010	Kyaka	1	
		Kigoma								0	
		Mara	Sirari				1			1	
		Mwanza				Usagara	1	Axle weigher - July 10	Nyanguge	1	
		Shinyanga			Mwendakulima		1		Varying	1	Faulty
					Tinde		1				
		Tabora					0			0	
			Total				25	Total		17	0

Note

FINAL REPORT

ANNEX F

HARMONISATION OF ROAD TRANSPORT LEGAL AND INSTITUTIONAL FRAMEWORKS

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GLOSSARY AND ACRONYMS

BICO	Bureau for Industrial Cooperation
COMESA	Common Market for Eastern and Southern Africa
DARCOBOA	Dar es Salaam Commuter Buses Association
EAC	East African Community
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
IGAD	Inter-Governmental Authority for Development
IMT	Intermediate Means of Transport
KeNHA	Kenya National Highways Authority
KeRRA	Kenya Rural Roads Authority
KRA	Kenya Revenue Authority
KRFB	Kenya Roads Fund Board
KURA	Kenya Urban Roads Authority
LGA	Local Government Authority
MININFRA	Ministry of Infrastructure Rwanda
MINALOC	Rwanda Ministry of Local Government
MOFPED	Ministry of Finance, Planning and Economic Development
MOID	Ministry of Infrastructure Development
MoLG	Ministry of Local Government
MoR	Ministry of Roads
MoT	Ministry of Transport
MoWHC	Ministry of Works, Housing and Communications
MoW	Ministry of Works
MV	Motor Vehicle
NARSC	National Road Safety Council
NEMA	National Environmental Management Authority
NGO	Non-Governmental Organisation
NMIMT	Non-Motorised and Intermediate Means of Transport
NMT	Non-Motorised Transport
ONATRACOM	Rwanda State Bus Transport Company
PMO-RALG	Prime Minister's Office-Regional Administrations & Local Government
PPP	Public Private Partnership
RRA	Rwanda Revenue Authority
RTDA	Rwanda Transport Development Agency
RURA	Rwanda Utilities Regulatory Agency
SUMATRA	Surface and Marine Transport Regulatory Authority
TABOA	Tanzania Bus Owners Association
TANROADS	Tanzania National Roads Agency
TPF	Tanzania Police Force
TRA	Tanzania Revenue Authority
SADC	Southern African Development Community
UNRA	Uganda National Road Agency
URA	Uganda Revenue Authority
URFB	Uganda Road Fund Board

EXECUTIVE SUMMARY

Introduction

A move from the existing road transport policies and regulations to a new set of harmonised standards and regulations requires a thorough investigation of legal and institutional issues to ensure that the expected benefits are not undermined by unexpected barriers. An important contribution of a thorough legal and institutional analysis is to specify any such legal and institutional issues which may hinder progress, and to motivate the will of politicians and professionals at the appropriate levels towards overcoming them.

The overall objective of the Transport Facilitation Component is to make it possible to have reliable, efficient and safe road transport services. This is to be achieved by reviewing and harmonising six key areas of road transport. The specific objectives of the study on Transport Sector Legal and Institutional Frameworks were to achieve the following:

- To review the existing road transport policies, laws and institutional structures, from each member state and propose areas for improvement and harmonisation. The criteria for determining the soundness of any existing law or policy is whether or not it allows the road sub-sector to perform its functions optimally.
- To assess the prevailing legal and institutional issues that may present organisational barriers to successful implementation of harmonisation of road transport in the East African Community area.
- To investigate the needs of and prospects for wider institutional reforms to encourage the implementation of harmonisation of road transport in East Africa.

To achieve these goals, the study methodology has adopted a broad approach which includes a desk study, interviews and focus group discussions, expert meetings and stakeholders meetings.

Transport Legal Framework

A road transport legal framework is a set of rules and regulations that create conducive environment for establishing good management practices for the road transport sector. It determines the roles and provides the authority for each stakeholder to act by setting out all the legislation for the regulation of the sector and gives each stakeholder the necessary powers for a range of activities. The road transport legal framework is dictated to a large extent by the relevant transport policy of a given country. To guide improvements in transport service regulation, such a policy statement should endorse the primary role of market forces in determining price and service levels, with the role of government limited to ensuring that competitive conditions prevail and that safety and environmental considerations are met.

The four possible broad areas in which legislation is needed in road transport are; (i) road infrastructure, (ii) road traffic, (iii) vehicle and driver licensing, and (iv) road transport licensing & management. In developing road transport legislation, there is often strong pressure on the part of government to incorporate considerable detail in the highest level of legislation in order to define closely the limits within which implementing regulations are drafted. The drawback with this approach is that the legal framework becomes too cumbersome, and minor regulatory changes in subsequent years require time-consuming changes in primary legislation rather than relatively simple changes to implementing regulations and ministerial decisions.

Transport Institutional Framework

Transportation systems are supported by a number of institutions that range from laws and regulations to informal conventions. These institutions are defined by and maintained at base by culture and values. Institutions can therefore be broadly defined as social rule structures with associated standing patterns of behaviours and procedures. Based on this definition, institutional issues are people and organisational issues that are an integral part of the activities and functions of any agency. Since human attitudes, opinions and biases are a major and essential part of any decision making process, institutional issues are bound to affect the implementation of any new methodology or technology.

The essential components of road transport institutions include (i) good governance, (ii) separation of functions, (iii) system coherence and (iv) sector coordination. In addition to these components it is important that there should be a minimum overlap of duties between organizations and cost-effective methods should be used to carry out responsibilities. As a result the transport sector has three main institutional types, namely:

- Policy and legal institutions as represented by the Ministries of Transport;
- Regulatory/executive institutions, represented by modal transport administrations/agencies;
- Institutions that provide transport services, namely the transport service enterprises.

Convergences and Divergences of Legal Frameworks in the EAC

A review of the legal frameworks of the EAC member states revealed that the framework laws in the road infrastructure areas are to a large extent similar. All member states have created legal frameworks for the management and financing of roads with regard to maintenance and development activities. However a number of areas in the legal framework still need to be harmonised as indicated below:

- **Road Infrastructure:** The framework laws in the road infrastructure areas are already in harmony.. However, further harmonisation is required in the following areas:
  - **Road Acts**: Functional classification of roads with their resulting legal dimensions of carriageway and shoulder widths. Further amendments to the road acts are required to allow the use of harmonised design standards and specifications that will result from this study.
  - **Road Fund Acts**: Harmonisation is required in the area of transit tolls and overloading fees and fines. A review of the principal sources of the road funds should be carried out so as to make sure that the contribution from the respective sources is balanced across the region.
  - **Axle Load and Maximum Weights**: There is need to harmonise the laws regarding the GVM as well as the maximum axle loads including the enforcement in terms of weighbridge operations. Relevant sections of the road acts should be amended to allow the adoption and use of the proposed EAC bill on overload control and management.
  - **Private Sector Participation**: There is a need to harmonise the framework legislation that provides for the private sector participation in road infrastructure investments.
- **Road Traffic Regulations and Safety Enforcement**
  In order to affect smooth cross border operations a number of areas some resulting from this study need to be harmonised:
  - **Maximum speed:** There is a need to harmonise the speed limits for the various classes of roads; the penalties and fines for non compliance with the speed limits.
  - **Driving on Public Roads:** The two Member states of Burundi and Rwanda drive on the right hand side while the rest drive on the left. Rwanda has undertaken a study to determine the most economically advantageous driving side and is planning a more comprehensive

study. The findings of the proposed study and analysis of the impacts of the recommendation of the study to the EAC should form a basis for discussion on the harmonization of the driving side in EAC.

- **Road Signs:** The road signs currently in use in the Member states are not uniform and therefore need to be harmonised for improved safety and operational efficiency.

- **Road Transport Operator Licensing**
  - **Public Transport:** There is a great need to improve laws and regulation that govern the quality and level of service of public transport across the region both for urban and inter city services.
  - **Vehicle Inspection:** For safe operations the vehicles plying EAC roads have to be in good mechanical condition. There is therefore a need to harmonise the vehicle inspection laws and procedures for all passenger vehicles as well as all other commercial vehicles.
  - **Operator and Driver Licensing:** There is need to have uniform laws regarding driver training and licensing as well as the licensing of operators for public transport.
  - **Road Transport Sector Regulation:** There is a need for a framework law to cater for economic regulation of the road transport sector with regard to the economic efficiency. Such regulation will concern market entry in order to eliminate distortions in user choice of transport modes (NMT and IMT services) and promote stakeholder consultation in setting of tariffs and other prices.
- **Vehicle Registration and Licensing**
  - Domesticate the provisions of the regional agreements especially the Tripartite Agreement on Road Transport;
  - Develop a uniform system of registering and licensing of motor vehicles based on common parameters.

Institutional Framework: Convergence and Divergence

The institutional arrangements for road transport in the five Member states are quite diverse as it serves different Transport policies. There is a need for harmonisation, first to meet the internal needs of the respective national transport policies and also the needs of the region. The following areas of road transport institutional framework need to be harmonised:

- **Separation of Functions:** There is need to harmonise the separation of functions between Policy making organisations and Regulatory as well as Service providing organisations. In all the Member states the organisations responsible for the road transport policy should be different from those regulating the transport sector as well as those providing the transport services.
- **Road Transport Sector Planning and Coordination:** One organisation in each of the five Member states should have the responsibility for the coordination of all issues related to road transport. This organisation should also include a knowledge centre where all documentation on road transport policies, operations, statistics and information are deposited.
- **Separation of Regulation and Enforcement functions:** Currently some organisations carry out both functions of regulation and enforcement while in some Partner State these are already separated. There is need to harmonise this area in such a way as to separate regulation from enforcement.
- **Creation of an Organisation for Regulatory Impact Analysis:** Currently there are a number of regulatory decisions being proposed and implemented ranging from axle load limits to installation of speed governors. It is proposed to create a centre in each Partner State to be tasked with the analysis of the impact of the various regulatory decisions.

- **Road Development and Maintenance:** All five Member states have created similar institutions for carrying out road development and maintenance. However there are slight variations in the day to day operations of these organisations mainly in their level of independence from parent organisation and therefore political interference. It is therefore proposed to harmonise the structure and therefore the operations of road development and maintenance organisations so that they exercise the same level of independence.
- **Road Transport Services:** There is a need to create regulatory agency in each Partner State that has not established one to regulate all issues related to public transport including operator licensing, the level of service, safety of passengers, PSV body construction, requirements for drivers of PSV drivers, route allocation, journey speed, headway of public transport vehicles etc.

1. INTRODUCTION

1.1 Background

Harmonisation of the road transport sector in Member states requires as a prerequisite the harmonisation of their legal and institutional frameworks. The first step in establishing a harmonised framework is to review the road transport policies and how they fit in with other aspects concerning road infrastructure and road transport services. Currently the five Member states have in place documented transport policies which differ greatly in terms of their scope and content. Most of these policies no longer respond to practical realities, as they are out of date. As a result, proposing areas for harmonisation, means also indicating the areas of policy to be reviewed and updated. To guide improvements in the road transport sector's legal and institutional framework the respective policies should endorse the primary role of the market forces in determining price and service levels. The policy statements should limit the role of government to ensuring that competitive conditions prevail and that safety and environmental conditions are met.

Therefore, a move from the existing transport policies and regulations to a new set of harmonised standards and regulations requires a thorough investigation of legal and organisational issues to ensure that expected benefits are not undermined by unexpected barriers. In addition, in Member states as in all other countries, transport policy-making tends to take place under the assumption that prevailing legal and institutional structures are fixed. Therefore, an important contribution of a thorough legal and institutional analysis is to specify any such organisational features which may hinder progress and to motivate the will of politicians and professionals at the appropriate levels towards overcoming them. This is particularly important in the area of road transport because much of the decision-making take place at the national or local level, where decision-makers consider that broader legal and institutional issues fall beyond their professional remit.

1.2 Objectives

This study is part of the East African Trade and Transport Facilitation Project. The component whose objectives are to be achieved through this assignment is the one concerned with the support to transport facilitation. The overall objective of the Transport Facilitation Component is to make it possible to have reliable, efficient and safe road transport services. This is to be achieved by reviewing and harmonising six key areas of road transport namely:

1. Standards and Specifications including Abnormal and Awkward Loads
2. Environmental Regulations and Standards
3. Vehicle Registration and Licensing
4. Road Safety Regulations, Strategies and HIV/AIDS Control on Transport Corridors
5. Weighbridge Operations and Interconnectivity including Training of Operators
6. Transport Sector Legal and Institutional Frameworks

In particular, item 6 will consider the necessary practical steps to be taken in the area of institutional and legal framework in order to successfully harmonise the road transport sector. The specific objectives of the study on Transport sector Legal and Institutional Frameworks is to perform the following:

- Review of the existing road transport policies, laws and institutional structures, from each Partner State and propose areas for improvement and harmonisation. The criteria for determining the soundness of any existing law or policy is whether it allows the road sub-sector to perform its functions optimally.

- To assess the prevailing legal and institutional issues, that may present organisational barriers to successful implementation of harmonisation of road transport in East Africa.
- To investigate the needs and prospects for wider institutional reform to encourage the implementation of harmonisation of road transport in East Africa.

The analysis recognized the need for synergy between coordination and regulation and the need to separate policy formulation & strategic planning from road transport service provision and operation. In additional the study will investigate public, business and political acceptability and acceptance issues, which may present social and political barriers to successful implementation of proposed harmonisation.

1.3 Methodology for the Study

A key characteristic of the thematic area on Legal and Institutional Framework is the possibility of integrating different approaches in order to achieve the objectives. To achieve these goals, the study has adopted a broad approach which includes a desk study, interviews and focus group discussions, expert and stakeholders meetings. The main components of the methodology are:

1.3.1 Desk Study

This involved the collection and review of documents and literature on the Transport Sectors in all member states. It included a review of literature related to transport policies and plans, literature on legal and institutional frameworks and any other relevant documents. The review included the following areas:

- Legal and Institutional Framework for the transport sector, safety and environment.
- Transport Policies: Policy documents including the policy structures and the policy making processes.
- Implementation of Transport policies: organizations of the transport sector, planning, implementation, maintenance, regulation and financing.
- Provision of transport services; private sector role; transport regulation and pricing, public private partnership.

1.3.2 Interviews and Meetings

Information on current sector performance was gathered through interviews and meetings with experts and stakeholders. This approach was found useful in capturing the experience, views, analysis, and concerns of key stakeholders at national, Local Government as well as at community levels. In interviewing various key informants a checklists was used for each category of stakeholders. An open-ended qualitative interview was developed. In general three broad groupings of respondents were identified and have provided information namely:

- National Level: Ministry of Transport, Ministry of Roads (Works), Executive Agencies, Ministry responsible for local government, Regulatory authorities etc.
- Local Government Level: Planning and Engineering Departments, trade and economic services departments, agriculture and cooperatives, Chairmen of LGAs etc.
- Community Levels: Transport service providers and users, local business owners, school children, petty traders etc.
- Selected beneficiaries were identified and interviewed to assess satisfaction of services provided and the level of community participation in policy making. Discussion was extended to cover areas of good governance, quality of service delivery, access to services, downward

accountability and responsiveness of Government authorities to community demands. Efforts were made to identify the nature of environmental and social issues associated with the provision of transport services.

1.3.3 Analysis of Data and Information

This involved analysing the data and information collected in sufficient detail to yield results that can assist in achieving the objectives. Specifically the analysis aimed at identifying the following:

- The legal and institutional shortcomings with regard to provision of adequate road transport services,
- Legal, institutional and social barriers to the harmonization of road transport sector as detailed in this project brief,
- Areas of convergences and divergences on key issues.

1.3.4 Consensus Building Workshops in all Member states

- **Workshops:** Experts' workshops were held in all member states to build consensus on main findings on existing practices and draft proposals for harmonisation.
- Task Force comments/criticism: Task Force meetings were held in Dar es Salaam and Mwanza to review the Working Papers and Draft Final Report respectively, and propose the way forward.

2. OVERVIEW OF POLICY, LEGAL AND INSTITUTIONAL ISSUES

2.1 Definition of Terms

There are many types of legal and institutional arrangements in place today that serve the interests of transportation systems all over the world. These arrangements are founded on national transport policies which in turn reflect the economic and social aspirations of their respective countries. Understanding the policy, legal and institutional arrangements provide the foundation for the analysis of the existing transport situation in any country. It is this understanding which forms the basis for any suggested improvements in the transportation sector of the relevant economy. Therefore, in order to propose improvements and areas of harmonisation for the road transport sector in Member states, a definition of the terms to be used in the discussion is given below.

2.1.1 Transportation

This is defined as the movement of people and/or goods via one or more modes such as roads, railways, waterways and airways. The provision of transport has for most part, been institutionalised within these modal areas. However, this paper is concerned with the road transportation mode whose goals focus on maximising mobility and minimising the primary constraints of congestion and safety. The range of constraints that must be considered in making road transportation decisions have widened over time to include;

- Environmental quality
- Energy resources
- Competitiveness
- Economic development
- Social equity
- Changing technology

2.1.2 Road Transport Policy

This can be taken as a statement of intent by the government on how it intends to guide decisions in the sector of road transport. The transport policy document will state the objective to be achieved by the policy within a given economic entity as well as the scope of its impact. A policy statement is dynamic and not simply a list of static statements to be implemented at given times. Policy cycle is the term used to describe this continued learning and improvement of the policy document as implementation is ongoing as shown in Figure 1.

2.1.3 Road Transport Legal Framework

This is a set of rules and regulations that create conducive environment for establishing good management practices for the road transport sector. It determines the roles and provides the authority for each stakeholder to act by setting out all the legislation for the regulation of the sector and gives each stakeholder the necessary powers for a range of activities. The first step in establishing an improved legal framework for road transport is to review road transport policy and how it fits in with broader policy aspects, especially aspects concerning road infrastructure and other modes of transport. The next step is to review the existing road transport regulations to identify those that are inconsistent with regulatory objectives and to define the need for new or alternative regulations.

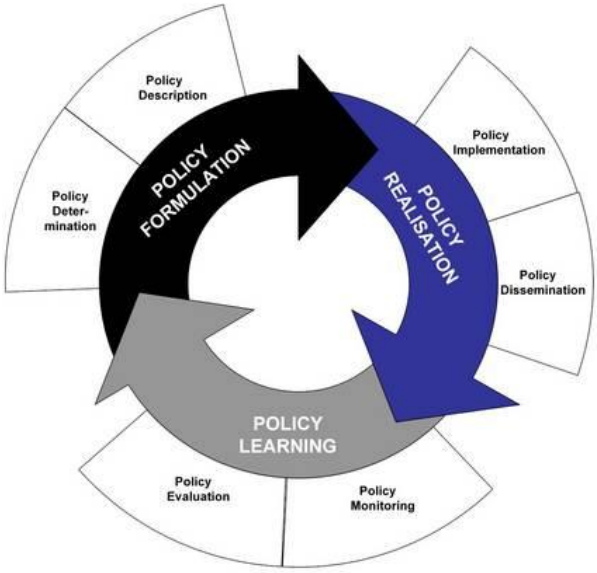

Figure 1: Policy Cycle

Source: Nathan Associates

2.1.4 Road Transport Institution Framework

Transportation systems are supported by a number of institutions that range from laws and regulations to informal conventions. These institutions are defined by and maintained at base by culture and values. Institutions can therefore be broadly defined as social rule structures with associated standing patterns of behaviours and procedures. This definition is general enough to take into account the diversity of organisational arrangement that characterise the transport sector in the member states where for example the road sector is managed at national, regional and municipal levels. More institutions are still evolving as a consequence of the rapid growth in demand for road transport, and it seems like this growth in the number of institutions will continue as more constraints are taken on board in transport policy development.

At any given time, societies have rules that define accepted behaviours and action patterns for institutions such as property rights, provision of infrastructure, management practices, governance, the role of markets etc. Institutions are sometimes confused with organisations as shown in Table 1.

Table 1: Organisations vs. Institutions

Organisations	Institutions
Universities	Higher Education
Government	Governance
Association	Influence circles/Structures
Companies	Markets or Competition

Source: BICO

In this study institutions will be defined broadly as rule structures and not as specific organisations so as to accommodate the diversity of organisations involved in transport management in the Member states.

A legal and institutional framework is usually developed from a national transport policy. Legislation is a tool by which policy is implemented. Thus the basis for a road sector legal and institutional framework is the relevant policy statements covering the road transport sector in the National Transport Policy Document. As a result a legal/institutional analysis considers whether the laws are adequate to support the implementation of the proposed policy and whether the institutions are in place to implement the proposed policies. Therefore weaknesses in the legal and institutional framework could be a result of a weak policy formulation and policy realisation measures.

2.2 Road Transport Issues in Member states

This section will present an overview of the Road Transport issues in Member states in general, highlighting issues that are important for the overall functioning of the sector. These issues will be briefly discussed under the headings of Policy, legal framework and institutional framework as defined in section 2.1 above.

2.2.1 Current Status of Transport Policies

Table 2: Current Status of Member states Transport Policies

MEMBER STATES TRANSPORT POLICIES				
Country	Date	Scope	Approval Stage	Remarks
BURUNDI	2006	Framework with some implementation detail	Approved	Policy is time bound (2006-2010)
KENYA	2009	Highly Detailed	Approved	
RWANDA	2008	Framework	Approved	
TANZANIA	2003	Framework with some implementation detail	Approved	A New Policy is currently being developed
UGANDA	2001	Detailed	Submitted to cabinet	Revised with preparation of Transport Master Plan

Source: Nathan Associates Inc.

Table 2 is from a recent study titled "A Corridor Diagnostic Study of the Northern and Central Corridors of East Africa" by Nathan Associate Inc. One aspect of the study reviewed the national transport policies of the Member states specifically to assess how they affect corridor performance. The following findings from the Corridor Diagnostic Study were found to be very relevant to the present study on the harmonisation of Road transport:

(1) All current national transport policies acknowledge and recognise the need to comply with current commitments of their membership in the EAC. However the policy documents do not outline plans of how their respective governments will implement the commitments they have assumed. As a result, current policies do not:

- identify regional instruments which governments are required to implement (e.g. the Tripartite Agreements on Road Transport and Inland Waterways),
- assess which legislative and institutional measures are needed to implement regional agreements domestically or

- quantify these commitments in terms of required financial and human resources.
- there is also evidence of national priorities intruding and overshadowing regional commitments.

This is a significant failure because the present study envisages a number of harmonisation proposals which will have to be owned up and implemented by each Partner State.

(2) In most states, the process of policy development and implementation is too lengthy. This undermines the relevance of the policy documents. While policy is under development, officials are constrained from embarking on new programmes and initiatives, as there is an understandable tendency to await the outcome of the policy process.

(3) It was also found that some member states' policies are not formalised that is policy proposals are not translated into appropriate legislation and programmes. In the absence of a legislative mandate, transport ministries are constrained in requesting for additional funds to implement new or expanded programmes.

(4) Some states' policies are out of date, and as a result can no longer guide the government's sector programmes and reforms. There have been piecemeal reforms that have superseded existing policies which indicate that governments have embarked on new policy directions. This is the case, for example, in Tanzania, which has revised its ports legislation to implement the landlord port authority model, despite the fact that this is not expressly foreseen in the existing policy.

2.2.2 Road Transport Legal Framework Issues

The road transport legal framework is dictated to a large extent by the relevant transport policy for the given country. Ideally such a policy will define overall objectives and responsibilities for policy-making and implementation. It will state the respective roles of government and the private sector in road transport and the basis for road transport regulation namely to primarily promote safety and efficient use of roads. To guide improvements in transport service regulation, such a policy statement should endorse the primary role of market forces in determining price and service levels, with the role of government limited to ensuring that competitive conditions prevail and that safety and environmental considerations are met. For countries without a market economy tradition or with a legal framework that has remained unchanged for many years, the scope for changes in order to improve the Legal framework can be considerable. It may for example involve changes to the basic traffic regulations concerning driver training, testing and licensing, vehicle inspection and registration, and road and traffic management systems and rules, in order to provide a clear and sound basis for safety regulation.

The four possible broad areas in which legislation is needed in road transport are; (i) road infrastructure, (ii) road traffic, (iii) vehicle and driver licensing, and (iv) road transport licensing & management. In developing road transport legislation, one important issue concerns the level of detail required in primary legislation. There is often strong pressure on the part of government legislators to incorporate considerable detail in the highest level of legislation in order to define closely the limits within which implementing regulations are drafted. The drawback with this approach is that the legal framework becomes too cumbersome, and minor regulatory changes in subsequent years require time-consuming changes in primary legislation rather than relatively simple changes to implementing regulations and ministerial decisions. The following are some of the scope that should be covered by the broad areas of legislation mentioned above.

(1) Road Infrastructure: Important issues to be covered include the functional classification of various roadway types, acquisition and management of right of way, responsibility for construction and maintenance, and responsibility for financing. Vehicle sizes and weights and to what extent these are based on economic criteria and encourage efficient use of roads. Table 3 summarises the relevant legal issues.

Table 3: Road Infrastructure Legal Issues

- Road classification and Declaration
- Administrative and management responsibilities,
- Execution of Road works
- Road Financing
- Restrictions on use of Roads
  - weight limits for axles (of different configurations),
  - overall vehicle and load weight limits,
  - overall vehicle and load dimension limits (length, width and height)
  - exceptional use provisions (deciding conditions under which abnormal loads can use the roads)
- Penal provisions.

Source: BICO

(2) Road Traffic Regulations and Safety Enforcement: Most countries base these provisions on the UN Convention on Road Traffic (also known as the Vienna Convention, 1968) and the UN Convention on Road Signs and Signals (1968). In East Africa, Tanzania has opted to follow the SADC Road Traffic Act model and the SADC road signs manual. Table 4 gives a minimum scope to be covered by a typical road traffic legal framework.

Table 4: Road Traffic Regulations and Safety Enforcement

• administrative responsibilities, • general rules of behavior, • status of signs and signals, • rules for proper movement of traffic on roads, • speed limits, • responsibility of motor vehicle operators, • rights and duties of pedestrians, • special rules for cyclists and motor cyclists, • proper use of motor vehicle equipment,	• road signs, signals and markings, • authority to investigate traffic violations, • authority to investigate traffic accidents, • traffic accident reporting and information system, • penal provisions

Source: BICO

(3) Vehicle Registration and Driver Licensing: Important issues concern establishing clear responsibilities for administering driver and vehicle licensing/inspection. To allow the possibility of private involvement in vehicle inspection and administrative processes, the legal framework should allow this to be determined, consistent with government policy. Much of the detail of this legislation would have to be included in secondary legislation, especially regarding the conditions for vehicle inspections and the vehicle design and equipment standards. A minimum requirement for the latter is usually minimum standards for safety/environmental features such as lamps, brakes, horn, signal lights, wipers, mirrors, windows, tires, exhaust systems, seat belts etc., which are

the basis for the roadworthiness inspections. Table 5 shows the minimum requirements for this item.

Table 5: Vehicle Legislation Issues

- objectives of motor vehicle regulations,
- administrative responsibilities,
- motor vehicle registration and road licensing requirements,
- motor vehicle inspection requirements,
- design and equipment standards of motor vehicles and trailers,
- weight, dimension and loading of motor vehicles and trailers,
- dangerous goods provision,
- vehicle ownership certification,
- motor vehicle statistics and information,
- penal provisions.

Source: BICO

In driver licensing the things to be made clear include the role of the private sector and external agencies, in general as well as in training and even testing drivers. In some countries the government lacks the administrative capacity to train and examine drivers effectively. Even when they can, it is often more efficient to allow accredited driving schools to compete to provide training. The legislation should allow all these possibilities, so that training can be performed in accordance with government policy in this area (see Table 6).

Table 6: Driver Licensing Legal Issues

- administrative responsibilities (authority to issue licences),
- driver licensing requirements and procedures,
- qualification requirements for driver examiners,
- refusal, suspension and revocation of driving licences,
- licence fees,
- driver licence registration and information system,
- driver training schools,
- qualification requirements for driving schools and driving instructors,
- certification of driving instructors,
- refusal, suspension and revocation of licences for driving schools and driving instructors (optional)

Source: BICO

(4) Road Transport Operator Licensing: Important issues that this will cover include the extent to which quantity rather than quality controls are used as the basis for licensing, and if tariff and fare controls are required. The conditions for licence issuing should make the reasons for refusal, suspension and make revocation of licences clear, to avoid giving too much discretionary power to licensing officers. A distinction between enforcement of licence requirements (by a licensing authority) and of general road traffic laws (by the police) would normally be made. Table 7 shows the minimum legal issues for operator licensing.

Table 7: Road Transport Operator Licensing Legal Issues

- objectives of licensing,
- administration of operator licences,
- refusal, suspension and revocation of licences,

- licence fees,
- appeal procedures,
- planning of routes and terminals,
- control of terminals,
- monitoring of services,
- reporting of offences,
- enforcement of licence regulations,
- penal provisions

Source: BICO

2.2.3 Transport Institutional Issues in East Africa

Based on the definition above, institutional issues are people and organisational issues that are an integral part of the activities and functions of any agency. Since human attitudes, opinions and biases are a major and essential part of any decision making process, institutional issues are bound to affect the implementation of any new methodology or technology. Since the mid-1980s, transport sector institutions in Member states have been undergoing structural reforms. This has been primarily in the areas of road transport, rail and air transport but has touched on shipping fleets, ports and terminals. It was during this period that the public-private partnership concept became a viable alternative in the implementation of infrastructure projects, as well as in transport service provision and operations.

Many transport sector stakeholders have welcomed these reforms due to the visible inefficiencies of government transport operations. As a result in the original three Member states (Kenya, Tanzania, Uganda) the government started to withdraw from micromanagement and operations of many transport sector services. Overregulation and central management have been successfully replaced in the past two decades by deregulation approach along with autonomous transport regulatory administrations and organizations. State-owned companies have been successively privatized regardless of profit or loss status. With this, the services have been increasingly outsourced to the private sector and the administrations took over the role of the clients.

The primary target of restructuring and redefining the roles in the transport sector is to establish an enabling environment for efficient sector operation. An enabling environment provides the legal basis to impose the right mix of obligations and incentives. Within this arrangement, the private sector functions as a service provider and State agencies exercise regulatory and supervisory functions. Supervisory institutions must have sufficient capabilities and independence to undertake basic planning, administer regulations, and guide the development of the industry.

2.2.4 Principles for Effective Transport Institutions

The ultimate responsibility of creating an enabling environment rests with the central government through the formulation of the Transport Policy by the Ministry of Transport. The efficient management mechanism for the transport sector is based on modern management principles that effectively cater for the following:

- Efficient operation of the national transport sector;
- Transparent, fair and effective regulation of the transport sector;
- Market-oriented provision of transport services;
- Enabling environment for sector development through private sector involvement (and foreign direct investments) and through counteracting corrupt practices;

- Enabling substantial growth in sector revenue through higher productivity and re-channeling income from corrupt practices to the State budget.

Individual Member states have developed a range of transport sector organization structures to suit their particular political, social and economic conditions. While there is no optimal structure that enjoys universal support, organization structures should be developed following certain principles that ensure effective sector management namely: (a) good governance, (b) separation of functions, (c) coherence, and (d) sector coordination, to ensure.

(1) Good Governance: Governance implies structures and processes to determine the use of resources available for the public good. Good governance implies efficient, impartial and transparent decision-making practices in public agencies. Transparency in decision-making and strict adherence to the laws and regulations are the basis for combating corrupt practices. Good governance must be the main concern in the public sector reform and auditing process.

As a result of democratic reforms in the region governance structures are becoming more complex as they are required to include the views and need of all stake holders. At the same time they are being asked to become more flexible to address interests and needs of an expanding range of stakeholders and a more dynamic production and market environments. All these raise the following issues:

- How to handle an increase of stakeholders in the road transportation decision making process.
- How to handle complex decision conflicts generated by these stakeholders that, in turn, are slowing consensus formation and increasing cost.

(2) Separation of Functions: Good governance can only be seriously pursued by separating responsibilities in a hierarchical structure. The institutions setting policies and drafting laws should not be involved in their implementation. In the transport context, the ministerial level should delegate regulatory functions to a regulatory body that applies these regulations to enterprises providing transport services. The ministry retains an oversight responsibility and provides for a higher level for appeal by the public and businesses within the sector. Again, a regulatory body should not be involved in the service provision, due to likely conflict of interest. Moreover, safety auditors should be independent from the mode regulators and operators.

The regulatory body could be an autonomous governmental authority or agency. In some cases, it could also be a private enterprise with regulatory duties. However, it must be able to take day-to-day decisions autonomously within the set framework.

The creation of quality organizations should be based on good governance and a sound legal framework. They should not depend on a strong political leader or State power as it may not provide stability on the longer term.

(3) System Coherence: The current road management structures in Member states are inflexible, vertically organized and insular. They are located in public sector organisations and structured by civil service codes meant to support staff that evolved during a vertically organized industrial era. As a result they are dominated by civil & transportation engineers. The transport sector requires a coherent policy and organizational structures, consistent laws and regulations and good professional staff. The staffing of these new organization

should include professionals from economics, law, environment and business disciplines and a more flexible decision making process.

Coherence is a precondition which is necessary to enable good administrators, regulators and operators to make good use of their potential and professional staff and their skills as they seek to manage transport services.

(4) Sector Coordination: With the separation of functions, coordination may become a concern. Coordination can be maintained despite the delegation of responsibilities in several ways; for example, through appointment and overruling power but also through policies and performance objectives. Given the privatization of the transport sector, direct control of the service-providing enterprises is no longer an option. A combination of management by objectives and delegation is the only way forward.

Coordination may go beyond the organisation to policies and policy making processes. The consistency of treatment between modes is especially important in transport policy making because each mode has an effect on other modes and this effect should be taken into account. It is important to examine the degree of coordination between actors in the policy-making process especially the degree of fragmentation and compartmentalization. Fragmentation denotes the existence of discrete policy making processes per transport mode or per stakeholder. Compartmentalization on the other hand denotes a lack of coordination among actors participating in the Transport Policy making for the same transport mode or within a specific actor for various modes.

2.2.5 The Structures of Transport Institutions

The principles above have been applied to some countries in East Africa and other developing countries to reform institutions in the transport sector. The common patterns show that there should be a minimum overlap of duties between organizations and cost-effective methods should be used to carry out responsibilities. The transport sector is composed of three primary elements:

- Policy and legal institutions: the ministry of transport;
- Regulatory/executive institutions: modal transport administrations/agency;
- Institutions that provide transport services: transport service enterprises

The relational interactions between the three elements of transport sector management shown in Figure 2 results in organisations that are essentially similar and therefore amenable to harmonisation. The basic structure will consist of Ministry of Transport, modal regulatory agencies, and transport service enterprises.

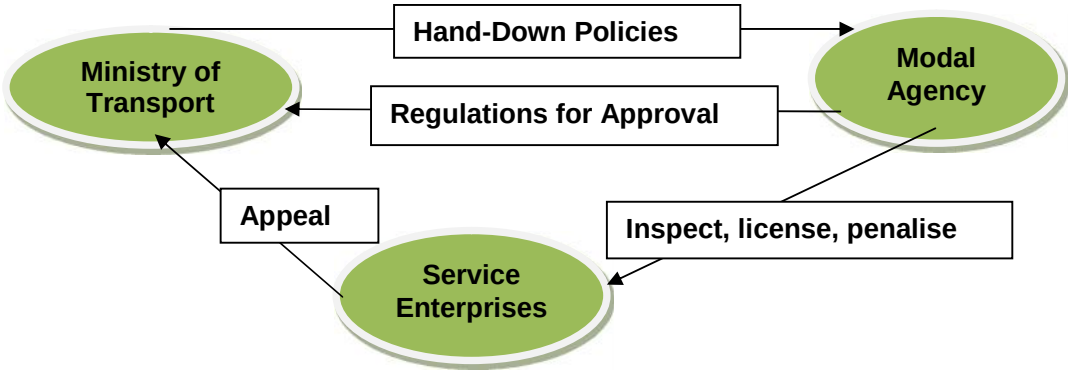

Figure 2: Relational interaction between transport sector institutional elements

(1) **Ministry of Transport:** The ministry of transport is ideally an efficient body that creates the enabling environment for balanced sector growth. Its principal interest is to preserve the autonomy and commercial orientation of the various modal transport agencies and administrations under it within the social and political environment context. The minister of transport exercises administrative trusteeship over government administration and takes political responsibility for the overall sector.

The Ministry of Transport is the custodian of the National Transport Policy with responsibilities for policy formulation, policy review and the associated legal framework for transport sector operations by public enterprises and private companies. This responsibility extends to the coordination of all transport policy making structures and the management of the policy making process.

The Ministry of Transport has also the responsibility for regulating the work of its executive agencies mostly through performance agreements and approval of their business plans. The Minister of Transport has the power to appoint the Chief Executive Officers of the transport agencies under the ministry. This power of appointment and removal for just cause is sufficient to assure that the agency heads are responsive to the requirements of the sector.

(2) **Modal Executive/Regulatory Agencies:** The modal executive agency functions in the following way: the executive agency typically carries out the ministry's activities aimed at meeting specific sector policy objectives. A typical agency in this category is the road construction and maintenance agency whose basic objective is to construct and maintain infrastructure facilities as per the transport policy.

The transport regulatory agency applies the policies and regulations developed by the ministry to assure the public that the transport services are reliable and cost-effective. The regulatory agency enforces the laws and ensures compliance with the regulations governing service provision. This is done via inspection, licensing and permitting procedures with follow-up enforcement (penalties and fines) either directly or through the police force. The ministry's role is to issue the agency with clear objectives and to review and approve the agency's business plans for meeting the given objectives.

The regulatory/executive agency must be autonomous in daily operations from the ministry in order to separate policy from regulation functions. The minister retains the power to overrule the agency over any of its actions through an appeals procedure.

(3) **Transport Service Enterprises:** Depending on the mode, the enterprises may have to report in a timely fashion progress in meeting service objectives and report shortcomings concerning safety and deviation from regulations. If they do not operate in conformance with the regulations, they may be penalized and, in the last resort, lose their license to operate. The operating enterprises have the appeal option to the minister.

Based on the legal requirements, State enterprises (if any) may have to prepare business plans to be approved by the transport ministry. Enterprises respond to new policies, plans, laws and regulations via service plans. In special cases, where public commitment and funds (as in public transportation) are requested, the minister will have to submit the required funds for government approval.

3. REVIEW OF LEGAL AND INSTITUTIONAL FRAMEWORK

Following the adopted methodology the first step in this study was to undertake a desk study of all available documentation so as to come up with information on the status quo for the subject matter area. The starting point was the respective transport policies of the member states and the resulting framework of laws enacted for their implementation.

3.1 Burundi

The Transport policy of Burundi is included in the sector policy document for transport, postal service and communication which is valid for the years 2006 – 2010. The major road sector constraints are; poor road infrastructure, lack of transport fleet and equipment, physical and administrative constraints on the road corridors and high transport costs.

3.1.1 Legal Framework

Table 8 presents the areas of legislation with all the legislation currently supporting road transport infrastructure and operations.

Table 8: Road Transport Legal Framework for Burundi

Area of Legislation	Legislation
1. Road Infrastructure	• Act No.1/04 of February 2009 **(LOI N°1/04)** • Law No 1/06 of 10/09/2002 on Financial Resources of The National Roads Fund • Decree No. 100/117 of 27 October 2001 On Statutes Of The National Roads Fund • Ordonnance Ministerielle No 720/70
2. Traffic Regulations and Safety Enforcement	• Act No.1/04 of February 2009 **(LOI N°1/04)**
3. Vehicle Registration and Driver Licensing	• Act No.1/04 of February 2009 **(LOI N°1/04)**
4. Operator Licensing	• Act No.1/04 of February 2009 **(LOI N°1/04)** • Burundian Environmental Code **LOI n°1/010 du juin 2000**

Source: BICO

The existing legal framework concerning road transport in Burundi is adequate in the coverage of traffic operations, vehicle registration and driver licensing. The policy document we reviewed was time bound and expired in 2010. Overall the following were noted concerning the legal framework;

- The framework is dominated by one principal act No. 01/04 of 2009, which comprehensively covers most road transport operational issues. Other areas covered include road financing and management through the creation of a Roads Office. In the licensing of operators, the Burundian Environmental code is used to address issues of pollution by road transport vehicles.
- The country does not have its own design standards and specifications; instead it uses international or French standards.

3.1.2 Observed Weaknesses in the Legal Framework

When compared to the policy objectives as well as the overall requirements of harmonisation the legal framework exhibits the following weaknesses:

- The transport policy was set to expire in 2010; this might lead to a period when there is no positive guidance for the road transport sector. On the other hand this might provide Burundi with an opportunity to develop a new policy that is complementary to that of the other Member states in the direction of a common transport policy.
- Burundi does not yet have any legislation to accommodate the PPP type of project, thus making it difficult for the private sector to participate in infrastructure development.
- Burundi has a law on axle load control but it has not become operational because of lack of weighbridges.

3.1.3 Institutional Framework

Table 9: Institutional Framework for Road Transport in Burundi

Name of Institutional Arrangement	POLICY AND COORDINATION		AGENCIES FOR SECTOR REGULATION, DEVELOPMENT & MAINTENANCE			TRANSPORT SERVICES
	Policy Making	Planning & Coordination	Regulation & Enforcement	Infrastructure Dev.& Mtce.	Financing	Transport Services
Ministry of Transport Works & Equipment	Yes	Yes				
Roads Office				Yes		
Directorate of Internal Transport	Yes	Yes				
Directorate of External Transport	Yes	Yes				
Road Fund Board					Yes	
Police Department			Yes			
Ministry of Land-plan & Environment			Yes			
Burundi Revenue Authority			Yes			

Source: BICO

Based on information from the available documents it can be seen that there is a reasonable institutional framework to implement the transport policy. Policy making is handled by the Ministry of Transport Public Works and Equipment which also handles planning and coordination through the directorates of internal and external transport.

The classified national road network (4,800 km) falls under the Ministry of Transport Public Works and Equipment and is managed by its agency namely the Roads Office (Office Nationale des Routes). The Roads Office handles the road development and maintenance while financing for road maintenance is provided by the Road Fund (the Fonds National Routier). The road fund is primarily funded by the fuel levy and other resources contributing to the fund are import duties on vehicles and driving license fees.

Other regulatory organisations include the police department for traffic safety, Ministry of Land-plan and Environment for environmental impact assessment and Burundi Revenue Authority for axle load regulation. Table 9 shows the current road transport organisations in Burundi.

3.1.4 Proposed Areas for Harmonisation and Improvement

Based on the existing situation, best practices discussed in section 2 and discussions with experts in Bujumbura, the following are recommended measures for harmonisation and improvement of the legal and institutional framework in Burundi.

POLICY: Burundi should embark on a comprehensive review of its National Transport Policy since the current one has expired. The proposed new policy should contain the following as a minimum:

- The goals and objectives of the proposed policy should be in harmony with those of the other member states, including elements of comprehensive regulation, and a commitment to regional intergration. This will enhance development towards a common transport policy for the EAC member states in the near future.
- The proposals should also aim at implementing the already agreed upon regional instruments such as the Common Market Protocol and the Tripartite Agreements on Road Transport and Inland Waterways.
  In the area of transport infrastructure, it should fast-track the adoption of PPPs, starting with rules on PPP project identification, preparation and procurement.

LEGAL FRAMEWORK: Burundi should work to enact the following legislations aimed at improving the road transport sector and harmonising it with other Member states.

- Adop**t** the draft East African Community Vehicle Load Control Bill, 2012 which was presented by the EAC Secretariat to the Council of Ministers on 17 February, 2012. Enac**t** a law to regulate private sector participation in road infrastructure development through PPPs..
- Enact a law to provide for comprehensive regulation of the road transport sector in harmony with other EAC member states.

INSTITUTIONAL FRAMEWORK: In line with the proposed harmonisation and improved measures above, it is proposed that the following organisation should be created:

- An organisation to implement the road transport regulatory measures proposed by the above mentioned act.
- An organisation to carry out road safety research, training and data collection made possible by some amendment of the act 01/4 of 2009.

3.2 Kenya

Kenya has a well documented integrated transport policy which should inform the type of legal and institution framework the country needs. The vision of the policy and its mission are summarised below:

- **Vision:** "A world-class integrated transport system responsive to the needs of people and industry"
- **Mission:** "To develop, operate and maintain an efficient, cost effective, safe, secure and integrated transport system that links the transport policy with other sector policies, in order to achieve national and international development objectives in a socially, economically and environmentally sustainable manner"

The following are the highlights of the policy

- Clarification of the roles of the central and local governments, statutory bodies, non-governmental bodies, and the private sector in the delivery and management of transport infrastructure and services,
- User pays and polluter pays principles to facilitate economic efficiency, generation of sufficient revenues to support development, operation and maintenance of transport infrastructure and services, eliminate distortions in user choice of transport modes, eliminate to the extent possible externalities in production and consumption e.g. pollution and congestion,
- Stakeholder consultation in setting of tariffs and other prices,
- Financing of economic infrastructure through user charging or cost recovery from direct users,
- Financing of social and strategic infrastructure through subsidisation on a declining basis over time,
- Institutionalisation of Regulatory Impact Analysis to enable assessment of regulatory proposals.

3.2.1 The Legal Framework

The transport sector is governed by numerous statutes that fall under two broad categories, namely statutes affecting all sectors of the economy and sector-specific legislation. Many of the sector-specific laws are outdated and require urgent review to facilitate the effective operations of the entities they govern and to enhance harmony in the transport sector. Relevant laws governing road transport are currently being amended and still many more require amendments in order to bring them in line with the goal of the transport policy.

Recent sector reforms have amended laws in the road infrastructure area to be in line with the policy objectives. Table 10 shows the legislation coverage for the most important areas of road transport infrastructure and operations.

The current legal framework to a large extent aim at progressive improvement in road transport efficiency and a possible lowering of transport costs. It adequately covers the policy requirement for road infrastructure funding in that it provides for sources of funds from user charges (fuel levy) and direct recovery from users (tolls). The legislation in this area also puts in place the mechanism for the collection and disbursement of funds through the Kenya Road Board and the respective executive agencies (KeNHA, KURA, KeRRA). The enactment of the Public Procurement Act has made it possible to lay down rules governing the identification of PPP projects, their preparationand

procurement. However, there is still a need for a specific legislation on PPPs which among other things will ovehaul road sector laws to accomodate the role of the private sector. At the institutional level the legislation will ensure that there is adequate capacity to plan and manage the PPP projects.

Table 10: Road Transport Legal Framework for Kenya

Area of Legislation	Legislation
1. Road Infrastructure	Kenya Roads Act, 2007 Kenya Roads Board Act, 2000 Road Maintenance Levy Fund, 1994 Public Road Toll Act, 407. Public Procurement and Disposal (PPP) Act
2. Traffic Regulation and Safety Enforcement	Road Traffic Act 1975, Cap 403
3. Vehicle Registration and Driver Licensing	Road Traffic Act 1975, Cap 403
4. Transport Operator Licensing	Transport Licensing Act, 1979, Cap 404

Source: BICO

The overall objective of the Traffic Regulation and Enforcement is to promote and enhance road Safety. To this end the Traffic Act 1975 of Kenya has in place stringent requirements for compliance by owners, operators and users of vehicles geared to ensuring safety, security and disciplined mobility on the roads. The act includes;

- Registration of Motor Vehicles,
- Driving licenses, permits, driver training and testing, traffic signs & signals
- Insurance requirements
- Use and Control of passenger Service vehicles (dimensions, weight and construction)
- Licensing of motor vehicles
- Speed limits
- Annual inspection of passenger vehicles
- Enforcement Regime: The role of the Police Force

The legal framework governing road transport operations in Kenya is provided by Transport Licensing act, which among other things require that all commercial vehicles for carrying goods or passengers for hire or reward be licensed. Currently, the Ministry of Transport's functions relating to the registration and licensing of vehicles have been transferred to the Kenya Revenue Authority (KRA). The functions transferred to the KRA include the licensing of commercial goods and passenger vehicles. The licensing of goods vehicles previously undertaken by the Transport Licensing Board (TLB) was abolished.

3.2.2 Observed Weaknesses in the Legal Framework

When compared to the policy principles for the road transport sector and the aspiration of the East African Community there are certain gaps in the legal framework that need to be dealt with. These gaps are in the following areas:

- Lack of a comprehensive regulator for the road transport sector: The policy proposes a role for an independent regulator to enable stake-holder's participation in setting of tariffs and other prices. Such a regulator can also guide the development of the sector, set operations standards and levels of service quality, provide intermodal regulation and safety regulation.
- There is a need to carry out a regulatory impact analysis of all regulatory proposals before and after they are put into effect.

- There is an urgent need for legislation to harmonise axle load and gross vehicle weight. The draft East African Community Vehicle Load Control Bill, 2012 which was presented by the EAC Secretariat to the Council of Ministers on 17 February, 2012 will fill the gap in this area.

3.2.3 Institutional Framework

Kenya's integrated transport policy has set out the following as the most important of objectives for institutional reform in the road sector.

- Appropriate linkages/working mechanisms between the Ministry responsible for Roads, Road Agencies, Kenya Roads Board and Development Partners shall be established within the Roads Sub-Sector to enhance service delivery.
- Stakeholders' participation shall be encouraged at all levels where road development, rehabilitation and maintenance are undertaken.
- Deliberate efforts will be made to build capacities (both institutional and human) in the Roads Sector, and
- Deliberate and sustained effort shall be made to strengthen governance in the Roads Sector.
- The Ministry will endeavour to register all road reserves with a view to protecting them from encroachment.

A brief review of the institutions currently working in the road sector is shown in Table 11. Most institutions are focused on regulation and enforcement (7 Nos), three are focused on infrastructure development and maintenance and two are focused on policymaking, planning and coordination. Only one institution deals with financing and none was identified to be providing road transport services.

With regard to the integrated transport policy the current institutional arrangement is still not adequate in the following key areas:

- Lack of a comprehensive regulatory agency for the economic efficiency of road transport sector to regulate market entry, eliminate distortions in user choice of transport modes (NMT and IMT services) and promote stakeholder consultation in setting of tariffs and other prices.
- There is no institutional arrangement for Regulatory Impact Analysis to enable a comprehensive evaluation of all the regulatory proposals for the sector.
- No appropriate working mechanism has been set up between the ministry responsible for roads, ministry responsible for transport, road agencies, Kenya Roads Board and other stakeholders to enhance service delivery in the roads sub-sector.

Table 11: Institutional Framework for Road Transport in Kenya

Institutional Arrangement	POLICY AND COORDINATION		SECTOR REGULATION, DEVELOPMENT & MAINTENANCE			TRANSPORT SERVICES
	Policy Making	Planning & Coordination	Regulation & Enforcement	Infrastructure Dev.& Mtce.	Financing	Transport Services
Dir. of Transport	Yes	Yes				
Min. of Roads	Yes	Yes				
KeNHA				Yes		
KeRRA				Yes		
KURA				Yes		
KRFB				Yes	Yes	
KRA			Yes		Yes	
TRB			Yes			
Traffic. Police			Yes			
NEMA			Yes			
NARSC			Yes			
MV Inspection			Yes			

Source: BICO

3.2.4 Proposed Areas for Harmonisation and Improvement

Based on the analysis of the relevant policy, the existing situation and the best practices for the road transport sector discussed in chapter 2, the following areas are proposed for harmonisation and improvement.

POLICY: Kenya should develop strategies and measures to strengthen the implementation and monitoring mechanisms in respect of transport agreements under COMESA, EAC, and other bilateral and multilateral agreements.

LEGAL FRAMEWORK: Kenya should enact and support the enactment of the following laws in order to implement its transport policy and be in harmony with other member states:

- Enact legislation for the creation of a road transport regulator as proposed in the current policy and as already done in Rwanda and Tanzania. This act will create an appropriate framework for the regulation of international and domestic road transport and should be supported by an appropriate institutional framework.
- Support the newly proposed EAC bill on overload control management that is being finalised.
- Support the proposed EAC bill on vehicle legislation and licensing

INSTITUTIONAL FRAMEWORK: In line with the proposed harmonisation and improved measures above, it is proposed that the following organisation should be created:

- An organisation to implement the road transport regulatory measures proposed by the above mentioned act.
- An organisation to carry out road safety research, training and data collection, this type of organisation is proposed in the policy and is similar to that proposed by the Traffic Acts of Uganda and the draft traffic & safety act for Tanzania.

3.3 Rwanda

Rwanda has in place a national transport policy articulating the vision and mission of the country as follows:

Vision of the Transport Sector: The vision of the Government of Rwanda on the issue of transport is to realise a modern infrastructure, cost effective and quality services with due regard to safety and environmental concerns. The infrastructure should be developed in a sustainable manner to support economic growth of the country and serve as a "pivot" for exchange of goods and services at national and regional level.

Mission of the Transport Sector: The mission of the transport sector is to contribute towards the realisation of the economic development and poverty reduction objectives, by the establishment and rational management of transport infrastructure and services. This will encourage economic growth and create an enabling environment for the development of socio-economic interactions, employment creation and the well-being of the population.

Highlights of the Transport Sector Objectives: The specific objectives are as follows:

- Strengthen the institutional framework and capacity of transport institutions and stakeholders in planning and management of the sector.
- To reduce and control transport costs.
- Assure the quality and durability of the rural, urban and international transport network.
- Improve safety for goods and passengers on the principle modes of transport.
- Establish a system to ensure sustainable financing of road maintenance.
- Facilitate access to cost effective transport services.

Strategies: In order to achieve these objectives, the principal strategic axes which will guide the actions to be implemented are as follows:

- Involvement of the private sector so that it can play a more important role in the development of the sector
- Harness support from decentralized entities so that they can assume their responsibility in management of the sector within the framework for establishing the policy of decentralization.
- Encourage the participation of local communities in the management of the sector, particularly in the maintenance of roads and tracks through the endorsement of works contracts with associations composed of people from neighbouring areas.
- Take into account the regional dimensions and process of integration which is in progress, in order to develop a transport sector that will benefit from opportunities offered and which responds to the challenges of the regional context.
- Reinforcement of the institutional and human resource capacities to build a viable transport sector, prepared to take up the challenges of the future.

3.3.1 Legal Framework

Rwanda has enacted legislation in most key areas to assist in the implementation of its National Transport Policy. Table 12 shows the legislation in the key areas of road transport:

Table 12: Road Transport Legal Framework for Rwanda

Area of Legislation	Legislative Acts

1. Road Infrastructure	Rwanda Roads Act, 2009 Road Maintenance Fund (Law no. 52 of 2006)
2. Traffic Regulation and Enforcement	Presidential Decree n^{o} 85/01 (Traffic Police and Road Traffic)
3. Vehicle Registration and Driver Licensing	Presidential Decree n^{o} 85/01 (Traffic Police and Road Traffic)
4. Transport Operator Licensing	Law 39/2001 creating RURA

Source: BICO

The Road Act, 2009 covers all issues of road infrastructure including apportioning of administrative responsibilities. Road Maintenance Fund created in 2006 deals with the mobilisation of funds for road maintenance of all roads.

Presidential Decree n^{o} 85/01 deals adequately with all issues of traffic regulation, enforcement, vehicle and Driver licensing.

3.3.2 Observed Weaknesses in the Legal Framework

The following weaknesses were observed in the current legal framework for road transport in Rwanda.

- There is no legislation for regulating the private sector participation in infrastructure development through the PPP approach., There is need to harmonise axle load limits with member states and adopt uniform overload control.
- Although the policy is very clear concerning the regional dimensions and process of integration within the member states, no concrete measures and strategies have been developed to domesticate the various agreements and protocols on road transport.

3.3.3 Institutional Framework

Table 13 shows the institutional arrangement for road transport in Rwanda. Overall there are a sufficient number of organisations to implement the current policy except in the few areas identified below:

- There is also no institutional for the coordination of safety and development of safety measures and standards, apart from the National Police who are there to enforce the existing laws.

Table 13: Institutional Framework for Road Transport in Rwanda

Institutional Arrangement	POLICY AND COORDINATION		SECTOR REGULATION, DEVELOPMENT & MAINTENANCE			TRANSPORT SERVICES
	Policy Making	Planning & Coordination	Regulation & Enforcement	Infrastructure Dev.& Mtce.	Financing	Transport Services
MININFRA	Yes	Yes				
MINALOC		Yes				
Kigali City Council				Yes		
District Authorities				Yes		
Road Maint. Fund					Yes	
RTDA		Yes		Yes		
RRA					Yes	
RURA			Yes			
National Police			Yes			
ONATRACOM						Yes

Source: BICO

3.3.4 Proposed Areas for Harmonisation and Improvement

Based on the analysis of the relevant policy, the existing situation and the best practices for the road transport sector discussed in chapter 2, the following areas are proposed for harmonisation and improvement.

POLICY: Rwanda should develop strategies and measures to strengthen the implementation and monitoring mechanisms in respect of transport agreements under COMESA, EAC, and other bilateral and multilateral agreements.

LEGAL FRAMEWORK: Rwanda should enact and support the enactment of the following laws in order to implement its transport policy and be in harmony with other member states:

- Enac**t** a law to regulate private sector participation in road infrastructure development through PPPs..
- Support the newly proposed EAC bill on overload control management that is being finalised.
- Support the proposed EAC bill on vehicle legislation and licensing.

INSTITUTIONAL FRAMEWORK: In line with the proposed harmonisation and improved measures above, it is proposed that the following organisation should be created:

- An organisation to carry out road safety research, training and data collection as proposed by the Traffic Acts of Uganda and Tanzania

3.4. Tanzania

Tanzania's integrated national transport policy was adopted in 2003 and was supposed to be the focus of reforms in that sector. The mission and vision of the policy are as follow:

Vision: To have an efficient and cost effective domestic and international transport services to all segments of the population and sectors of the national economy with maximum safety and minimum environmental degradation.

Mission: Develop safe, reliable, effective, efficient and fully integrated transport infrastructure and operations which will best meet the needs of transport and improve levels of service at lower costs in a manner, which supports government strategies for socio-economic development whilst being economically and environmentally sustainable. Sector weaknesses identified in the policy document include the following:

- Fragmented planning and management responsibilities lacking policy guidance
- Inadequate formalised coordination among principal actors
- Shortage of manpower in planning units
- Non-application of modern planning methodologies and databases
- Inadequate infrastructure for NMT
- Lack of regulatory regime
- Insufficient dialogue between private and public sectors

3.4.1 Legal Framework

Tanzania has enacted legislation in all key areas of road transport and Table 14 below shows the legal framework currently in place.

Table 14: Road Transport Legal Framework for Tanzania

Area of Legislation	Legislative Acts
1. Road Infrastructure	• The Roads Act, 2007 • The Road and Fuels Tolls Act (Cap 220), Revised 2006 • Executive Agencies Act, 1997 • PPP Act, 2010 • Regulations for Weights, 2001
2. Road Traffic Regulations and Safety Enforcement	• Road Traffic Act, 1973 • Road Traffic & Safety Bill (2010 Draft)
3. Vehicle Registration and Driver Licensing	• Road Traffic Act, 1973
4. Transport Operator Licensing	• Transport Licensing Act, 1973 • Surface and Marine Transport Regulatory Authority (SUMATRA) 2001

Source: BICO

The legal framework for road infrastructure management is adequate. The Road Act 2007 provides for standards and specifications for roads, it also assigns management responsibilities for the various classes of roads. Infrastructure financing is provided for through the Road Tolls Act 1998 which creates the Road Fund and the Road Fund Board. On the issue of PPPs, Tanzania has adopted a new act since 2010 whose regulations are still being fine tuned.

The Road Traffic Act 1973 takes care of compliance requirements for road users and operators. The act covers the registration of motor vehicles, driving licenses/permits and driver training and testing.

The new Road Safety policy and the resulting draft bill for the Road traffic and safety act will update the area of safety coordination and planning.

The transport operator licensing act of 1973 provides the framework for operator licensing and while still in operation most of its provisions have been taken over by the Surface and Marine Transport Regulatory Authority (SUMATRA) act of 2001.

3.4.2 Observed Weaknesses in the Legal Framework

The legal framework for road transport in Tanzania has one general weakness which is derived from its outdated transport policy. Because of its age the policy is silent with regard to the latest reform issues such as PPPs, road safety coordination, the 2004 Ports act and the establishment and mandate of SUMATRA. In addition the following were observed;

- There is no update of the legislation and regulation on axle loads and vehicle weights including harmonisation with the other member states.
- There is a need to update the acts that are more than 10 years old, including the Roads Tolls Act 1998, Transport Licensing Act, 1973 and others.

3.4.3 Institutional Framework

In this section the institutional arrangements for road transport in Tanzania will be reviewed based on the documents available. The current institutional arrangements can be reviewed with respect to how they meet the existing transport policy objectives. In addition the impact of policymaking institutions and policymaking process on the existing institutional arrangements will be made.

The review of transport institutional arrangements shown in Table 15 below has revealed that most focus on regulation & enforcement, followed by planning & coordination and transport services provision in that order.

Most institutional arrangements are national in terms of their geographical coverage. Given that these institutional arrangements were created for many different reasons over time, it is important to assess them now in terms of the objectives of the National Transport Policy.

- **Planning and Coordination:** The National Transport Policy of 2003 was meant to address the weakness of “fragmented planning and management responsibility and lack of policy guidance”. It seems like this problem has not been adequately tackled as policy making is still handled by more than one organisation and no planning guidelines are available to guide sector plans.
- **Regulatory regime:** The 2003 Transport policy was also meant to address the lack of a regulatory regime. An act creating a regulatory body (SUMATRA) was passed in 2001 but up to the present a number of organisation are still carrying out certain regulatory matters namely:
  - **MoHA-Traffic Police Division:** Driver licensing
  - **TRA:** Vehicle registration and vehicle licensing
  - **MoW-Safety & Environment Department:** Environmental and Safety regulation including axle load control.
- **Others:** As per the transport policy a number of sector weaknesses were supposed to be addressed through institutional reforms in such areas as:
  - Manpower shortages in planning units
  - Inadequate formalised coordination among principal actors
  - Insufficient dialogue between private and public sectors

Table 15: Institutional Framework for Road Transport in Tanzania

Organisation	POLICY AND COORDINATION		SECTOR REGULATION, DEVELOPMENT & MAINTENANCE			TRANSPORT SERVICES
	Policy Making	Planning & Coordination	Regulation & Enforcement	Infrastructure Dev.& Mtce.	Financing	Transport Services
MoT, Policy & Planning Division	Yes	Yes				
MoW, Policy & Planning Division	Yes	Yes				
MoW, Safety & Enviroment Dept.	Yes	Yes	Yes			
PMORALG		Yes				
SUMATRA			Yes			
TANROADS				Yes		
Road Fund Board					Yes	
LGA's (132 Nos)				Yes		
MoHA, Traffic Police Department			Yes			
DARCOBOA						Yes
Usafiri Dar es Salaam						Yes
TRA			Yes			
TABOA						Yes

Source: BICO

- **Common Challenges:** The analysis also revealed common challenges or weaknesses such as:
  - **Lack of Mandate**: The transport service providers seem like ad hoc arrangement meant to address short term problems.
  - **Insufficient funding:** The funding available does not match the activity areas.

The Way Forward: Before making specific proposals for harmonisation of the road transport sector in Tanzania, it is important to note that there are current ongoing efforts to review the transport policy. The first step in this process has been the preparation of a working paper on transport policy formulation which outlines the process for a review of the process and involves three main steps namely:

- Meeting of all transport sector agencies and ministerial departments (22 Nos.)
- Meeting of all key stakeholders outside the Government
- Approval of the working paper on Transport Policy Formulation

Through this process it is assumed that complex decision conflicts can be handled openly with the policy makers trying to convince all other stakeholders of the government's role and responsibilities under the constitution.

3.4.4 Proposed Areas for Harmonisation and Improvements

Based on the analysis of the existing transport policy, the existing situation and the best practices for the road transport sector as discussed in chapter 2, the following areas are proposed for harmonisation and improvement in Tanzania.

POLICY: The ongoing policy review should include clear strategies and measures aimed at strengthening the implementation and monitoring mechanisms with respect to transport agreements under SADC, EAC, and other bilateral and multilateral agreements. This should be seen and understood as a step towards the creation of a common transport policy for the Member states.

The policy review should also rationalise and incorporate measures that have been implemented since the last policy was approved in areas such as private sector participation, sector regulation, infrastructure financing and the environment.

LEGAL FRAMEWORK: In order to harmonise its legal framework and improve it to meet the needs of the transport sector, the following should be done:

- Adopt the draft East African Community Vehicle Load Control Bill, 2012 which was presented by the EAC Secretariat to the Council of Ministers on 17 February, 2012.
- Support the proposed EAC bill on vehicle legislation and licensing and revise the existing legislations to accommodate the passage of this bill.
- Complete the review of the Road Traffic and Safety Act.

3.5. Uganda

The Ugandan Transport Sector Policy is still a draft in a form of a consultant report to MoWT titled "Transport Sector Draft Policy and Strategy Paper". Its recommendations are set within the principles of the Government's overall economic policy and strategy and therefore are followed in developing transport plans. The sector vision and mission statements are as shown below:

Vision: To have a reliable and safe infrastructure in works and transport that will deliver timely, quality, cost-effective and sustainable services to the people of Uganda.

Mission: To promote an adequate, safe and well maintained works and transport infrastructure and services, so as to effectively contribute to the socio-economic development of the country.

Key features of the Draft Policy and Strategy Paper: The following features are included in the draft policy and strategy paper;

- **Transport Services:**
  - Contribute to increase in trade, employment and economic output,
  - Improve access, through improved maintenance
  - Provision of efficient inter-modal interchange facilities,
  - Promote private sector operation of transport services
  - Encourage private sector investment in infrastructure,
  - Maintain high quality links through the Northern and central corridors
  - Equal opportunity for women in employment and service provision
- **Modes of Transport:**
  - Promote equitable treatment of different transport modes
  - Promote modal integration
  - Establish a plan to guide complementary development of all modes
- **Planning and Safety:**
  - Ensure safety of transport networks and operations
  - Frequently review sector regulation policies
  - Provide safe environment for pedestrian and NMT
  - Promote capacity building of local consultants and contractors
  - Promote land use transportation planning techniques in urban areas
  - Promote the development of Kampala Inland Port
  - Ensure that all projects are subjected to EIA
- **Financing:**
  - Use internal revenue for current expenditures and donor funding for infrastructure rehabilitation and upgrading
  - Simplify customs procedures and costs
  - Improve regional cooperation in transport i.e COMESA and EAC

Road Sub-Sector: Within the overall transport policy the road sub-sector has the following objectives:

- The private sector is to play a major role in transport operations while the Government confine its role to policy, planning and regulation.
- Create semi-autonomous agencies to perform specific functions such as management of infrastructure
- Ensure infrastructure maintenance remain organised and well funded
- Local Government authorities should be responsible for the roads in their own areas

- Allow market forces to determine the prices for road transport services
- Set targets for the improved measures such as condition of roads, participation in road works by local contractors
- Establish sustainable and efficient maintenance and rehabilitation regimes
- Take measures to reduce road accidents including the incorporation of safe features in road design
- Enforce axle load legislation through increases in public awareness and provision of additional weighbridges

3.5.1 Legal Framework

In view of proposed Transport sector policy, Uganda has embarked on the development of a National Transport Master Plan. With regard to the road sector, a legal framework has been put in place to address the most critical areas as shown in the Table 16 below:

Table 16: Road Transport Legal Framework for Uganda

Area of Legislation	Legislative Acts
1. Road Infrastructure	Roads Act 1949 (Cap 358) Uganda National Roads Authority Act, 2007 The Uganda Road Fund Act, 2008
2. Traffic Regulation and Enforcement	Traffic and Road Safety Act No. 15, of 1998
3. Vehicle Registration and Driver Licensing	Traffic and Road Safety Act No. 15, of 1998
4. Transport Operator Licensing	Traffic and Road Safety Act No. 15, of 1998

Source: BICO

From the above table it can be seen that the key areas of road transport are adequately covered in terms of a legal framework for development and operations.

The UNRA act of 2007 provides for the creation of a National Roads Authority as a body corporate that is mandated to manage the national road network in an economic and businesslike manner. The Uganda road Fund Act, 2008 establishes a Road fund for financing routine and periodic maintenance of public roads in Uganda. The fund is to be managed by a Road Fund Board representing both the public and private sectors and with a secretariat responsible for day to day operations.

Road transport operations including the vehicle registration and driver licensing is provided for under the Traffic and Road Safety Act No. 15, of 1998. This is the main law governing road transport in Uganda. It covers licensing of vehicles and drivers, the use of motor vehicles on the road, and control of traffic. It also establishes the Transport Licensing Board (TLB) and National Road Safety Council (NRSC). TLB issues licenses to regulate the use of public service vehicles, and goods vehicles. Vehicle registration is performed by the Ugandan Revenue Authority.

3.5.2 Observed Weaknesses in the Legal Framework

- The road safety policy has not been approved and this complicates the situation as it is not clear whether it gives guidance or not.
- The is no legal provision for a multi-sector transport regulator, as a result no economic regulation of the road transport sector is being carried out.
- Lack of a framework law for guiding the management of the PPPs project process.

3.5.3 Institutional Framework

Table 17 shows the institutional arrangement for the management of road transport in Uganda. Most of the organisations' focus on planning & coordination (5) and regulation and enforcement (7). Only the ministries of Works and Transport (MoWT) is involved in policy formulation while funding for road development and maintenance is only handled by the Uganda Road Fund and the Ministry of Finance, Planning and Economic Development.

Table 17: Institutional Framework for Road Transport in Uganda

Organisation	POLICY AND COORDINATION		SECTOR REGULATION, DEVELOPMENT & MAINTENANCE			TRANSPORT SERVICES
	Policy Making	Planning & Coordination	Regulation & Enforcement	Infrastructure Dev.& Mtce.	Financing	Transport Services
MoWT	Yes	Yes	Yes			
UNRA				Yes		
MoFPED					Yes	
URFB					Yes	
MoLG		Yes				
Urban & District LGAs		Yes		Yes		
NEMA		Yes	Yes			
TLB			Yes			
NRSC			Yes			
Private Service Providers			Yes			Yes
National Police			Yes			

Source: BICO

3.5.4 Proposed Areas for Harmonisation and Improvements

Based on the analysis of the draft transport policy, the existing situation and the best practices for the road transport sector as discussed in chapter 2, the following areas are proposed for harmonisation and improvement in Uganda.

POLICY: The draft Uganda transport policy should include clear strategies and measures aimed at strengthening the implementation and monitoring mechanisms with respect to transport agreements under SADC, EAC, and other bilateral and multilateral agreements. This should be seen and understood as a step towards the creation of a common transport policy for the member states.

LEGAL FRAMEWORK: In order to harmonise its legal framework and improve it to meet the needs of the transport sector, the following should be done:

- Support the newly proposed EAC bill on overload control management that is being finalised, and once the bill is passed into law implement it accordingly.
- Support the proposed EAC bill on vehicle legislation and licensing and revise the existing legislations to accommodate the passage of this bill.
- Enact a law to regulate the participation of the private sector in road infrastructure development.
- Enact a law to harmonise the regulation of the road transport sector in line with the current Rwanda and Tanzania laws.

INSTITUTIONAL FRAMEWORK: In line with the proposed harmonisation and improved measures above, it is proposed that the following organisation should be created:

- An organisation to implement the road transport regulatory measures proposed by the above mentioned act.
- An organisation to carry out road safety research, training and data collection as proposed in the policy.

3.6 Harmonization of Driving Side on Public Roads

The issue of whether or not to harmonize driving side on public roads came up during discussions in the workshops held in member states especially in Burundi and Rwanda during July 2011 and the Task Force Meeting which convened in Dar es Salaam during September 2011. Burundi and Rwanda drive on the right side of the road contrary to the rest of the member states. It was apparent that both states are taking seriously the UN 1998 resolution which urged countries to progressively shift to driving on the right and are concerned about the economic implication of change to left hand driving or retaining their status quo. Some of the crash costs in Burundi and Rwanda are due to the presence of significant proportion of RHD vehicles. The box below attempts to capture the issues and the current thinking of the people of Rwanda.

To drive on the left or the right side on public roads?

- Rwanda residents prefer right-hand-drive (RHD) vehicles as they are cheaply imported from South Africa and Japan compared with left-hand-drive (LHD) vehicles from Europe and USA.
- Rwanda government attributes crashes on cross border highways to RHD vehicles driven by foreigners who find it difficult to negotiate Rwandan roads and its traffic flow and have legislated against the use of RHD vehicles except for transit vehicles and for temporary (short term) use for other vehicles.
- The Ministry of Infrastructure study (2009) conclude that the RHD vehicles are 16 – 49 percent cheaper than LHD vehicles (it is cheaper to own and maintain RHD vehicles) and 54% of the people surveyed favoured switching driving sides (from right to left) supposedly because it becomes more convenient and safe to use RHD vehicles.
- As of November 2011 the Government of Rwanda was planning a more comprehensive study to determine the most economically advantageous driving side. It appears the government considers the Ministry of Infrastructure study to not have examined all the issues and that the study sample was not large enough as a basis for such important decision.
- Rwanda (government) also takes serious the UN 1998 Resolution which urges countries to progressively shift to driving on the right (since 72% of the world's total road distance carries traffic on the right - according to Wikipedia)
- The private sector in Rwanda has petitioned the government to switch driving sides as it is cheaper and therefore favours trade – a significant number of freight carrying vehicles into Rwanda are foreign registered RHD vehicles.
- The experts and stakeholders representing Rwanda in the workshop in Kigali and the Task Force Meeting which convened in Dar es Salaam (both organized during the present study) expressed their concern that the facts regarding the optimal driving side be established while noting the UN 1998 Resolution urging countries to progressively shift to driving on the right.

It appears that this question is not a priority to Kenya, Tanzania and Uganda at the moment, it is therefore wise to await the results of the study proposed by Rwanda. The EAC Secretariat could then arrange for an evaluation of the implication of the findings and recommendations of the proposed study to the EAC. The outcomes should form an informed basis for discussion on the need for harmonization of the driving side on public roads within the EAC.

4 SUMMARY OF POTENTIAL AREAS FOR HARMONISATION AND IMPROVEMENT

The harmonisation exercise is geared towards facilitation of smooth cross-border transport. Towards this end, it is therefore proposed to harmonise the legal and institutional framework in such a way that they no longer act to increase the cost of transport operations. The following are therefore potential areas for harmonisation.

4.1 Legal Framework

There are a number of areas in the legal framework which are candidates for harmonisation so as to improve cross-border transport. These areas include the following:

4.1.1 Road Infrastructure

The framework laws in the road infrastructure areas are to a large extent already in harmony. All Member states have created the legal frameworks for the management and financing of roads with regard to maintenance and development activities. However the legal framework in the infrastructure area needs further harmonisation in the following areas:

- **Road Acts**: Functional classification of roads with their resulting legal dimensions of carriageway and shoulder widths. Further amendments to the road acts are required to allow the use of harmonised design standards and specifications that will result from this study.
- **Road Fund Acts**: Harmonisation is required in the area of Transit tolls and Overloading fees or fines. A review of the principal sources of the road funds should be carried out so as to make sure that the contribution from the respective sources is balanced across the region.
- **Axle Load and Maximum Weights**: There is need to harmonise the laws regarding the GVM as well as the maximum axle loads including the enforcement in terms of weighbridge operations. Relevant sections of the road acts should be amended to allow the adoption and use of the proposed EAC bill on overload control and management.
- **Private Sector Participation**: There is a need to harmonise the framework legislation that provides for the private sector participation in road infrastructure investments.

4.1.2 Road Traffic Regulations and Safety Enforcement

In order to affect smooth cross border operations a number of areas some resulting from this study need to be harmonised:

- **Maximum speed:** There is a need to harmonise the speed limits for the various classes of roads; the penalties and fines for non compliance with the speed limits.
- **Driving on Public Roads:** The two Member states of Burundi and Rwanda drive on the right hand side while the rest drive on the left, this is an area that should be harmonised as soon as possible.
- **Road Signs:** The road signs currently in use in the Member states differ, they need to be harmonised for improved safety and operational efficiency.

4.1.3 Road Transport Operator Licensing

- **Public Transport:** There is a great need to improve laws and regulation that govern the quality and level of service of public transport across the region both for urban and inter city services.
- **Vehicle Inspection:** For safe operations the vehicles plying EAC roads have to be in good mechanical condition. There is therefore a need to harmonise the vehicle inspection laws and procedures for all passenger vehicles as well as all other commercial vehicles.
- **Operator and Driver Licensing:** There is need to have uniform laws regarding driver training and licensing as well as the licensing of operators for public transport.
- **Road Transport Sector Regulation:** There is a need for a framework law to cater for economic regulation of the road transport sector with regard to the economic efficiency. Such regulation will concern market entry in order to eliminate distortions in user choice of transport modes (NMT and IMT services) and promote stakeholder consultation in setting of tariffs and other prices.

4.1.4 Vehicle Registration and Licensing

- Domesticate the provisions of the regional agreements especially the Tripartite Agreement on Road Transport;
- Develop a uniform system of registering and licensing of motor vehicles based on common parameters.

4.2 Institutional Framework

The institutional arrangements for road transport in the five Member states are quite diverse as it serves different Transport policies. There is a need for harmonisation, first to meet the internal needs of the respective national transport policies and also the needs of the region. The following areas of road transport institutional framework need to be harmonised:

4.2.1 Separation of Functions: Policy making and Regulatory/Service institutions

There is need to harmonise the separation of functions between Policy making organisations and Regulatory as well as Service providing organisations. In all the Member states the organisations responsible for the road transport policy should be different from those regulating the transport sector as well as those providing the transport services. However, the legal framework should provide for participation of all road sector organisations in the policy making process. This will make it easier to ultimately develop one common transport policy for the region.

4.2.2 Road Transport Sector Planning and Coordination

A unit within the MoT in each of the five Member states should have the responsibility for the coordination of all issues related to road transport. This unit should have a knowledge base with all documentation on road transport policies, operations, statistics and information in readily accessible form (both digital and hardcopy). The same unit should guide for the strategic planning of the whole road network and should coordinate the implementation of all network development plans.

4.2.3 Separation of Functions: Regulation & Enforcement

It is desirable that in all the five Member states the regulation function is separated from the enforcement function. Currently some organisations carry out both functions of regulation and enforcement while in some Partner State this is already separated. There is need to harmonise this

area in such a way as to separate regulation from enforcement. Secondly all road transport function should be under one regulator; licensing, safety, overloading, level of service, route entry etc.

4.2.4 Creation of an Organisation for Regulatory Impact Analysis

Currently there are a number of regulatory decisions being proposed and implemented ranging from axle load limits to installation of speed governors. The impact of these decisions is not being rigorously analysed to determine their impact on service levels or on overall policy objectives. It is proposed to create an organisation in each Partner State to be tasked with the analysis of the impact of the various regulatory decisions.

4.2.5 Road Development and Maintenance

All five Member states have created similar institutions for carrying out road development and maintenance. However there are slight variations in the day to day operations of these organisations mainly in their level of independence from parent organisation and therefore political interference. It is therefore proposed to harmonise the structure and therefore the operations of road development and maintenance organisations so that they exercise the same level of independence.

4.2.6 Road Transport Services

There is a need to create regulatory agency in each Partner State that has not established one to regulate all issues related to public transport including operator licensing, the level of service, safety of passengers, PSV body construction, requirements for drivers of PSV drivers, route allocation, journey speed, headway of public transport vehicles etc

4.3 Harmonization of Driving Side on Public Roads

Two Member states of Burundi and Rwanda drive on the right hand side while the rest drive on the left. Rwanda has undertaken a study to determine the most economically advantageous driving side and is planning a more comprehensive study. The findings of the proposed study and analysis of the impacts of the recommendation of the study to the EAC should form a basis for discussion on the harmonization of the driving side in EAC.

BIBLIOGRAPHY

GENERAL DOCUMENTS

1. Stough, Roger R. and Rietveld, Piet, "Institutional Issues in Transport Systems" Journal of Transportation Geography, Vol.5 No. 3 pp207 – 214, 1997.
2. William Naude, "Trade in Transport Services: South Africa and the General Agreement on Trade in Services" August 1999.
3. Rubiato, José María, "Emerging Challenges and Recent Developments Affecting Transport and Trade Facilitation," OIC Trade Logistics Branch, Division on Technology and Logistics, UNCTAD, Geneva, 8-10, 2010.

DOCUMENTS PERTAINING TO TRANSPORT AND TRADE IN EAST AFRICA COMMUNITY

4. Eastern Africa Transport Sector Scoping Study (Update), Main Report, GIBB Transport Planning, June 1999.
5. Analysis of Enforcement of Laws and Regulations that Govern Road Transport Industry in East Africa, TECHNO**S**ERVE, Feb. 2001.
6. The Treaty for the Establishment of the East African Community. EAC Publication 1, 2002.

DOCUMENTS PERTAINING TO INDIVIDUAL MEMBER STATES

Burundi

7. Sector Policy for Transport, posts and Telecommunication (2006 – 2010). *(Politque Sectorielle (2006 – 2010), Ministere des Transports, Postes et Telecommunications, April 2006)*
8. Act No. 1/04 on the Department of Transport and its Functions. (*LOI N°1/04 Fevrier 2009 Portant Sur Les Transports Interieurs Routiers*).
9. Ordonnance Ministerielle N° 720/70 Du 12/08/93 Portant Reglementation de la Charge Maximum par essieu des Vehicules Circulant en Territoire Brundais. (*Ministerial Ordinance for Axle load Control in Burundi)*
10. LOI N°1/06 Du 10/09/2002 Portant fixation des ressources du fonds routier national. *(Presidential Decree on Financial Resources of the National Road Fund)*
11. Decret N°100/117 Du 27/10/2001 Portant statuts du fonds routier national. *(Presidential Decree for the Regulation of the National Road Fund)*
12. Ordonnance Ministerielle N°720/CAB/304/2008 Du 20/3/2008 Portant Actualisation des Tarifs.D'Indemnisation Des Terres, Des Cultures et des Constructions en cas D'expropriation pour cause D'Utilite Publique. *(Ministerial Ordinance for Updating the Indemnification Tariffs for land, Crops and Buildings in case of Compulsory Acquisition for Public Interest)*
13. Loi n°1/010 du juin 2000 portant Code de l'environnement de la Re'publique du Burundi. *(Burundian Environmental Code)*
14. Code Minier et Petrolier de la Republique du Burundi. *(Mineral and Petroleum Extraction Code)*

Kenya

15. Integrated National Transport Policy: Moving a Working Nation, Ministry of Transport, Republic of Kenya, May 2009.
16. The Kenya Roads Act, 2007
17. Session Paper on Transport Policy Kenya, February 2010 Edition
18. Public Roads Tolls Act, CAP 407
19. Traffic Act, CAP 403
20. Traffic Rules
21. Transport Licensing Act, 1973
22. Transport Licensing Regulations

23. Draft National Environment Policy, June 2008

Rwanda

24. Ministry of Infrastructure, Transport Sector policy, December 2008
25. Cabinet Paper: Draft Law Regulating Road Network in Rwanda
26. East Africa Trade and Transport Facilitation Project: Progress brief, June 2010
27. Draft Law N° …..of…….Regulating Road Network in Rwanda
28. Presidential Decree nº 85/01 Regulating General Traffic Police and Road Traffic
29. Revised Organisation Structure of RTDA
30. Organic Law N° 32/2008 of 28/07/2008 Establishing the National Aids Control Commission (cnls) and Determining its Organisation, Functioning and Competence.
31. Fonds D'entretien Routier : Road Maintenance Fund, Work Progress Report, Period: 1st July – 31st December 2009, December 2009
32. Ministry of Infrastructure ; Action Plan 2009-2010.
33. Ministry of Infrastructure, The Study on the Possibility of Switching Driving Side in Rwanda, August, 2009.
34. Ministry of Infrastructure, Road Maintenance Strategy, May, 2008

Tanzania

35. United Republic of Tanzania, National Transport Policy, 2003
36. Roads Act, 2007
37. Road Traffic and safety Act – Draft Bill, March 2010
38. National Transport Policy, MOCT, URT, 2003
39. National Road Safety Policy, Sept. 2009
40. Road Traffic Act, 1973
41. Road Traffic (Maximum Weight of Vehicles) Regulations, 2001
42. Road Tolls Act, 1985
43. Road Tolls Act (Amendment nº 2), 1998
44. Surface and Marine Transport Regulatory Authority Act, 2001
45. Transport Licensing Act, 1973

Uganda

46. Ministry of Works, Housing & Communication; Initiatives to Facilitate Regional Trade and Transport, October, 2005.
47. Ministry of Works, Housing and Communications, Transport Sector- Draft policy and Strategy Paper, December 2001
48. Parliament of Uganda, Report of the Committee on Physical Infrastructure for the Financial Year 2006 – 2007
49. Traffic and Road Safety Act, 1998
50. Traffic and Road Safety (Weighbridges) Regulations, 2009
51. Uganda National Roads Authority Act, No. 15 of 2006
52. Uganda Road Fund Act, 2008
53. Uganda Roads Act, 1949