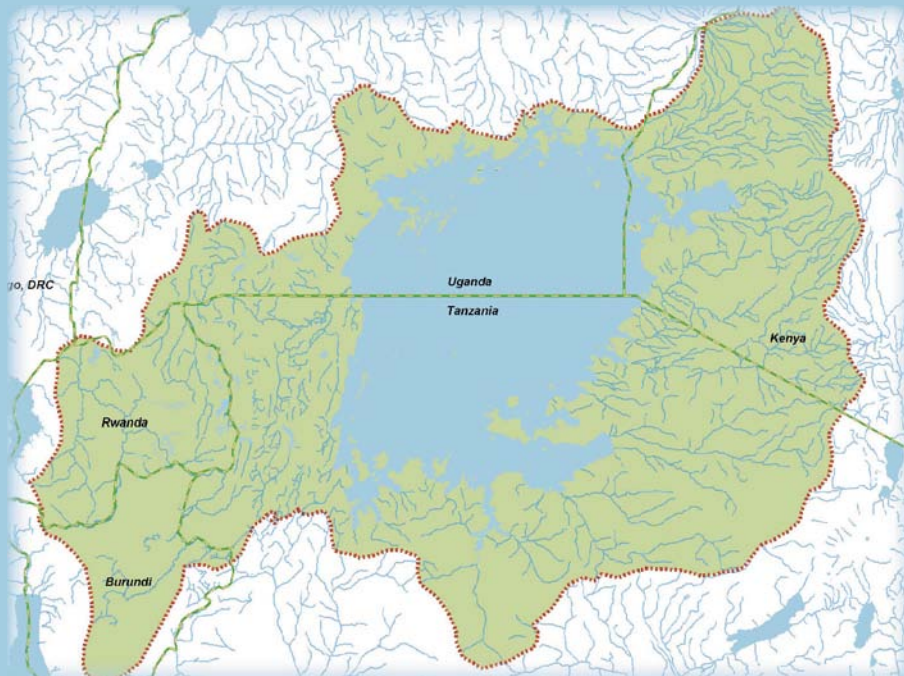




# **The Vision and Strategy Framework for Management and Development of Lake Victoria Basin**

## **Main Report**



A report by

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in collaboration with

**The Regional Task Force**

## **PREFACE**

This is the Main Report of the concluding presentation of the Vision and Strategy Framework for Management of Lake Victoria Basin project. The project was designed to assist stakeholders across the Lake Victoria Basin. Focus has been on developing broad consensus on realistic, achievable objectives and indicators for sustainable management of the Lake basin in a time frame of 15 years, and to develop mechanisms that will enable stakeholders to advocate their interest, provide feedback to government, and monitor progress towards achieving the goals set in the vision process.

The complete presentation includes the Main Report (this volume) and four annexes. These are the Baseline Information Report (Annex I) and the National Reports for Kenya (Annex II), Tanzania (Annex III) and Uganda (Annex IV). The National Reports of Uganda, Kenya and Tanzania have been prepared by, and are the sole responsibility of, the National Task Forces assisted by the National Consultants of the respective countries.

The Main Report and the National Reports bring to a conclusion the results of the broad participatory processes at village, district and national levels in the three countries as well as the process of harmonization the national inputs at regional levels. The Baseline Information Report presents background information and data collected during the initial stages of the project.

The contributors to this report feel privileged to have participated with the great number of stakeholders at local community, district, national and regional level and in assisting them in defining visions and strategies for sustainable management of the Lake Victoria Basin - for tomorrow and for generations to come. The number of people giving input to this process is innumerable, reaching more than 12,000. Some major contributors in final stages of compiling the report are listed in the Acknowledgement.

Under the general supervision of the Regional Task Force (RTF) appointed by the East African Community Secretariat, Dr. Terje Kleven (Project Manager), with assistance from Mr. Leif Lillehammer (Team Leader, International Expert Team) and Mr. Tore Hagen (Project Director) has been responsible for the outline and final editing of the Main Report and the Baseline Information Report. Several interactive discussions and revisions of previous drafts have taken place with the members of RTF. The National Task Forces and the respective Country Teams of the International Consultant have also provided crucial input.

## ACKNOWLEDGEMENTS

The ‘real work’ that forms the basis for this report has been undertaken by a wide range of stakeholders and actors representing governmental institutions and agencies, Civil Society Organisations and the private sector in the three partner states, Kenya, Tanzania and Uganda.

As the Client, the East African Community (EAC) has played a principal role in supervising the process and bringing forth the results. The National Task Forces in Kenya, Tanzania and Uganda spearheaded the vision and strategy development process in their respective countries all the way from village to national level. The results of their efforts are reported in the National Reports in annex II – IV. The National Consultants in each of the three countries have given invaluable support to the National Task Forces and as the coordinating tie between the task forces and the International Consultant (Statkraft Grøner and associates).

NORAD as the donor, through the Royal Norwegian Embassy in Kampala and the World Bank (in its coordinating role as contract partner) have been very helpful throughout the process. In particular the Norwegian Embassy should be thanked for providing additional funds to the NTFs. Assistance from the World Bank country offices proved crucial in solving the problems related to disbursement of funds to the NTFs that otherwise might have further halted project implementation.

Special thanks have to be extended to the Swedish International Development Agency (Lake Victoria Directorate, Stockholm) and the Swedish Embassy in Nairobi for playing a very constructive role during the whole process and for disbursing additional funds to the National Task Forces to complete the national processes.

Most important, great appreciation goes to all the stakeholders of the Lake Victoria Basin, who enthusiastically participated in the Vision and Strategy Development Process, from local to regional level. They provided crucial input to the process, and clearly defined their visions for the future as well as their views on how to get there.

We trust that the stakeholders at all levels have the ability to firmly connect visions to actions that will positively influence the future development of the lake basin for the generations to come and the reliance on its vast resources. Nelson Mandela has phrased this important interconnection in a clear-cut way:

*“A vision without action is just a dream; an action without a vision just passes time; a vision with an action changes the world.”*

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## LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
CBO	Community Based Organisation
CLVDP	Committee on Lake Victoria Development Programme
CSO	Civil Society Organisation
EAC	East African Community
ECOVIC	The East African Communities' Organisation for the Management of Lake Victoria.
GDP	Gross Domestic Product
GIS	Geographic Information Systems
HIV	Human Immunodeficiency Virus
IC	International Consultant
IET	International Expert Team
IUCN	International Union for the Conservation of Nature
IUCEA	Inter University Council for East Africa
LANESO	Lake Nyasa ('nyasa' water in kisukuma) Environmental Sanitation Organisation
LV	Lake Victoria
LVEMP	Lake Victoria Environmental Management Project (1 and 2)
LVFO	Lake Victoria Fisheries Organisation
LVFRP	Lake Victoria Fisheries Research Programme
MISR	Makerere Institute for Social Research
MLWE	Ministry of Lands, Water and Environment,(Uganda)
MOARD	Ministry of Agriculture and Rural Development (Tanzania)
(MOE&NR)	Ministry of Environment and Natural Resources (Tanzania)
NBI	Nile Basin Initiative
NC	National Consultant
NELSAP	Nile Equatorial Lake s Subsidiary Action Program
NGO	Non Governmental Organisation
NORAD	Norwegian Agency for Development
NPES	National Poverty Eradication Strategy has been formulated.
NTF	National Task Force
OSIENALA	(vernacular) Friends of Lake Victoria
PPP	Polluter Pay Principle
RTF	Regional Task Force
SAP	Structural Adjustment Programmes
Sida	Swedish International Development Cooperation Agency
SDI	Sexually Transferable Infections
STD	Sexually Transferable Deceases
UCLAS	University College of Land and Architectural Sciences
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDP	Development Programme
UNESCO	United Nation Education (S C) Organisation
USD	American (US) Dollars
WB	World Bank

## EXECUTIVE SUMMARY

### Background

Lake Victoria is the world's second largest fresh-water lake and the largest in Africa, with a surface area of 68,800 km<sup>2</sup>. The Lake basin area covers 193,000 km<sup>2</sup> with Tanzania occupying 44 per cent, Kenya 22 per cent, Uganda 16 per cent, Burundi 7 per cent and Rwanda 11 per cent. The size of the lake makes it a critical determinant of weather and climate in the region. Lake Victoria Basin has a population of about 30 million people of which approximately 25 million live in the three riparian states. i.e. about 30 % of the total population of the three countries (Kenya, Tanzania and Uganda).



**The Lake Victoria Basin and its boundaries, including elevations.**

More than 80% of the population in the Lake basin are engaged in agricultural production, the majority as small scale farmers and livestock owners producing maize and cash crops such as sugar, tea, coffee, cotton and meat. The fish resources of the lake sustain – directly or indirectly – livelihood for about 3 million people engaged in subsistence, artisanal and commercial fishing. The fisheries are very important as a source for foreign exchange earnings with an annual landed value of 300-400 million USD.

At the same time the lake is the final recipient of human and industrial wastes and eroded soils from natural and human-initiated processes in the basin. The multiple

activities in the Lake basin have increasingly come into conflict with one another due to several negative trends and driving forces, often working in combination. Some major threats are:

- *Ecological degradation* (contamination, pollution, land/forest degradation, biodiversity degradation, introduction of exotic species e.g.)
- *High population pressure* in the Lake basin
- *Widespread poverty* is found throughout the Lake basin
- *High mortality rates* (due to for example tuberculosis and malaria)
- *High incidences of HIV/AIDS*.

The Lake Victoria Basin is considered one of the most important shared natural resource by the Partner States of East Africa. Initially, much of the donor interest focused mainly on the lake, fisheries and fisheries management, ecology, biology, hydrology, water pollution and related natural science concerns. Over time a growing understanding emerged of the need to co-ordinate the many fragmented projects in the area. Despite this, there was weak regional policy framework and lack of agreements on management of the common resources in the lake basin. This resulted in increased level of interest to jointly develop and manage the resources to secure its ecological and economic health.

Joint management of Lake Victoria Basin as a shared ecosystem can be traced back to the recommendations in Agenda 21, following the Rio Summit of 1992. Informal discussions started immediately after the United Nations Conference on Environment and Development (UNCED) in Rio (Agenda 21) with an aim of broadening regional cooperation in environmental management and social issues affecting the Lake Victoria Basin. This culminated in the establishment of the Lake Victoria Environmental Management Project (LVEMP) through a Tripartite Agreement signed on 5<sup>th</sup> August 1994 in Dar es Salaam, which paved the way for both the preparation and implementation of the first phase of the project. This was closely followed by the signing of the Lake Victoria Fisheries Organisation (LFVO) Convention in 1996. These developments coincided with the revival of the East African Co-operation in 1996, which resulted in a number of milestones, viz.,

- The first EAC Development Strategy, 1997-2000, which designated LVB as an economic growth zone in recognition of the economic potential therein
- The commissioning of a study on institutional and legal framework for the management of the LVB in 1999 which culminated in the establishment of the Lake Victoria Program Unit at EAC Secretariat.
- Signing of the Treaty Establishing EAC, on 30<sup>th</sup> November 1999, which provided the legal basis for the establishment of a body to manage LVB (Article 114, of the Treaty).
- The commissioning of a study on Economic Potentials and Constraints in the LVB in 2000 to provide a conceptual basis for developing a strategy for the Basin.

- The signing in, April 2001, of the Partnership Agreement between EAC and Development Partners and the establishment of the Partnership Consultative Committee to guide future interventions in the Basin.
- The development of a Protocol for sustainable management and development of the LVB in 2002.

The LVEMP Regional Policy Steering Committee's decision of May 2001, that EAC spearheads the vision and strategy development process on Lake Victoria, was later adopted by the Committee on Lake Victoria Development Program (CLVDP). Recognising that there existed specific visions in the Basin – not least, those of LVFO and LVEMP, among others – the CLVDP mandated the EAC to ensure that the vision and strategy framework developed was broad enough to accommodate all present and future actors in the Basin. The vision and strategy framework development for the LVB has, thus, been implemented in recognition of the need to create harmony in interventionist approaches both to eliminate duplications and overlaps and to ensure full participation by stakeholders. This exercise was done simultaneously by the respective NTFs in all three countries then reviewed and harmonised by RTF. The task has been accomplished between November 2001 and August 2003, with major hitches and breaks in between occasioned by several organisational challenges.

Realisation of the great potential for healthy and sustainable socio-economic and environmental development of Lake Victoria Basin lies in combined efforts and integrated management of common resources across sectors and national boundaries.

### **Process and Methodology**

Realisation of the great potential for healthy and sustainable socio-economic and environmental development of the Lake Victoria Basin lies in combining efforts and integrating the management of common resources across sectors and national boundaries. The process of developing a *Vision and Strategy Framework* for resource management and development of the Lake Victoria Basin has been aimed at engaging stakeholders across the basin. The overall goal was to define a vision for sustainable management of the lake basin as well as compatible individual visions for the future. The process involved a broad range of stakeholders in a participatory manner aimed at the harmonisation of visions of various groups across sectors, regions and levels of governance, as well as the development of a framework for designing strategies, policies and actions needed to reach the vision.

The overall objective of the vision development process has been to assist stakeholders across the Lake basin to:

- Develop broad consensus on realistic, achievable objectives and indicators for sustainable management of Lake Victoria in a time frame of 15 years; and
- Develop mechanisms that will enable stakeholders to advocate their interests, provide feedback to government, and monitor progress towards achieving goals.



The common vision will serve as a shared basis for discussing perspectives, strategies and approaches that have to be in place to set key priorities, initiate agreed actions, and monitor progress towards the goals set.

A large number of stakeholder groups in the three riparian countries have been involved in this process – fisherfolk and their communities, fish processors and traders, farmers, representatives of the business community, conservationists, local authorities and central government.

The formulation of shared visions and strategies has been based on a set of overall values and principles guiding the process. Examples of such values are the principles and declared policies of *sustainable development* and *poverty alleviation*. The Terms of Reference for the project unambiguously state that a shared vision for the lake basin should rest on the concept of sustainable development, implicitly addressing questions of poverty alleviation, social justice and equity. Another set of values is set by the EAC Treaty, which states that economic development and co-operation between the partner states should be “people centred” and “private sector driven”, and built on existing economic diversity and equal sharing of costs, risks and benefits.

Visions and strategies will have to meet the basic needs and desires for a better future of the people of the lake basin without harming the basin’s ecosystem health or depleting its natural resources; in short, an approach with a clear *pro-poor* and *pro-environment* orientation.

These overall principles are underlying the overall ‘conceptual model’ that has been the basis of the processes in the three riparian countries and for the final Vision and Strategy Framework presented in this report. The conceptual model defines five, broad and mutually interlinked policy areas that will have to be simultaneously addressed to formulate comprehensible and sustainable development strategies for the Lake basin:

- *Ecosystems, Natural Resources and Environment* (resource management, protection and conservation);
- *Production and Income Generation* (natural resources utilisation)
- *Living Conditions and Quality of Life* (income and poverty, social services, health and education);
- *Population and Demography* (population development and migration); and
- *Governance, Institutions and Policies* (development and harmonisation of policies, institutions and implementation machinery).

Environmental status, economic development, social and demographic changes are closely interlinked. Each of the fields of activity may be regarded as a driving force for change, but at the same time a recipient of impacts from changes taking place in the other sectors. Healthy ecosystems, that provide the population with goods and services, are needed to reduce poverty. Vice versa, reduced social poverty reduces the strains on the environment. Sound environmental management is an integral part of the conditions for sustainable economic development; sound resource



management sustains the functioning of ecosystems and their production of goods and services to the population. Disturbances and/or changes in *negative* directions in any parts of the system will have impacts on the other parts and – to varying degrees – lead to harmful consequences for different stakeholder groups and interests.

For each of the five policy areas visions, prioritised strategies and indicators of change have been developed through processes starting at local level and ending with final harmonisation at the regional level.

### **Stakeholders and institutions involved**

The stakeholder consultation for vision and strategy development were designed to secure broad representation from local communities, central and local government, the private sector and business community, the academic society, civil society and non-government organisations (CSOs and NGO's).

In addition to representatives elected from communities, the district workshops attracted participants from district authorities offices, e.g. executive officers and officers from development planning, community development, extension services, environmental protection, health and social affairs, statistics etc. At the national level stakeholder consultations were primarily conducted as sector interviews or focus groups interviews.

### **Baseline study on status, trends, threats and challenges**

Stakeholder consultations were based on background information and data ("Information Packages") prepared by the International Consultant. The Baseline Information Report (Annex 1) summarises the main content of the information packages on a regional basis. For each policy area the report presents status and significant ongoing trends, their principal driving forces as well as impacts and consequences of the present trends for the environment, socio-economic development in the lake basin and for particular stakeholder groups affected. Chapters 3 and 4 of this report give a brief summary of the status and trends and the most crucial threats and challenges that will have to be met by effective policy initiatives and actions. These chapters describe the essential factual background on which stakeholder consultations were based and from which visions and strategies were developed.



***Fishing boat on Lake Victoria near Mwanza, Tanzania (by Tore Hagen).***

## **Visions, Strategies and Indicators**

### *The National Visions*

The national visions for Lake Victoria Basin, as formulated in the national reports (Annex II-IV), are phrased differently, but encapsulate some common, shared principles and values. The national visions (see box) all express that future development in the lake basin will have to take into consideration three closely interlinked policy issues:

- Economic development as a basis for prosperous populations and improved livelihoods;
- Sustainable use of the natural resource base; and
- Protection of the environment.

**Kenya:**

*“A Lake basin community enjoying a sustained natural resource base within a well conserved environment providing foundation for economic vibrancy that improves their livelihoods and increases opportunity for full realization of their potential”.*

**Tanzania:**

*“ A Basin with the resources sustainably managed and communities having high standards of living”*

**Uganda:**

*“A Lake Victoria Basin which is well planned and managed providing sustainable benefits, with a prosperous population meeting their development needs without depleting the natural resources and degrading the environment”*

*The Regional Vision*

The national reports and processes have been examined and evaluated at the regional level to reach a shared, harmonized vision across the three countries. The Regional Vision includes all dimensions inherent in the national visions but at the same time formulated in a way that distinguish the regional vision from those of the partner states. The Regional Vision for Lake Victoria Basin reads as follows

**The Regional Vision for the Lake Victoria Basin:**

*“A prosperous population living in a healthy and sustainably managed environment providing equitable opportunities and benefits.”*

*Regional Visions for the Policy Areas*

The national reports have also been the primary basis required to reach harmonised regional visions and prioritised strategies for the five policy areas.

**1 Ecosystems, Natural Resources and Environment:**

*“A prosperous livelihood and enhanced management of ecosystems, natural resources [and] a clean and healthy environment.”*

**2 Production and Income Generation:**

*“Resources sustainably and equitably utilised for increased income and poverty reduction in the lake basin.”*

**3 “Living Conditions, Poverty and Quality of Life”:**

*“A healthy, well educated society with high quality of life, well developed infrastructure and free from poverty.”*

**4 “Population and Demography”:**

*“A healthy, competent and productive population able to utilise and manage natural resources sustainably to achieve economic growth and development.”*

**5 “Governance, Institutions and Policies”:**

*“An empowered and gender sensitive community that observes the rule of law and human rights, well integrated institutional framework enabled by a policy environment that facilitates their involvement in the management of resources”.*

*Strategies and Indicators*

A wide array of strategies and change indicators was identified during the national processes. They were first identified at local level, pulled together at district level and finally evaluated and harmonised at a national level. The process is described in detail in the national reports (Annex II – IV).

Further harmonisation and prioritisation was conducted in regional discussions. Prioritised strategies and indicators were identified and elaborated for each of the five policy areas to reach the goals expressed by regional policy area visions. The purpose was to decide on the most critical issues to be the object of further strategy development.

It should be emphasised that this is not a set of strategies and action plans ready for implementation. Rather, the aim has been to outline the main *directions* for continued efforts to further develop and upgrade this framework into a set of sustainable development strategies for the lake basin.

There are *pro et con* arguments for setting priorities. In the end, this is a political process and not the task of a group of experts. On the other hand, in a situation of enormous challenges and scarce resources, one will have to employ the resources where they give the best return in terms of meeting the expectations laid down in the vision. Here, experts can give advice and suggestions how to design a good *mix* of strategies – ‘Strategy Packages’ – that cut across policy areas and sectors.

The following set of boxes is the prioritised set of strategies and indicators resulting from discussions, expert judgement and ranking procedures employed during regional level discussions. Focus has been on making the strategies and indicators as operational as possible at this stage and to minimise overlaps between the policy areas.



## Prioritised Strategies for Policy Area 1 - Ecosystems, Natural Resources and Environment

<b>Sector Strategies</b>	<b>Indicators</b>
<p><b>1 Fish resources management</b></p> <ul style="list-style-type: none"> <li>Promote sustainable fisheries policies, baseline surveys, extension services, monitoring, surveillance and control measures</li> </ul>	<p>Maintained fisheries yield at an estimated long-term level Reduced numbers of licences and quotas</p>
<p><b>2 Land use and natural resources management</b></p> <ul style="list-style-type: none"> <li>Improve land use and natural resources planning with particular focus on urban expansion</li> <li>Promote proper land use management practices</li> <li>Promote co-management of wildlife</li> <li>Conduct wildlife inventories</li> <li>Promote the establishment of community forests and woodlots/afforestation/tree planting schemes/agroforestry</li> </ul>	<p>Decrease in encroachment into vulnerable areas. Improved land cover Number of approved land-use plans in place  Number of wildlife co-management areas established Increase in wildlife inventories Forest cover/number of trees</p>
<p><b>3 Water resources management</b></p> <ul style="list-style-type: none"> <li>Promote integrated water resource/water catchment management</li> <li>Promote water quality and quantity monitoring</li> <li>Intensify water weed monitoring and control</li> </ul>	<p>Reduced sediment loading into the lake  Improved water quality  Reduced density of weeds</p>
<p><b>4 Pollution control and waste management</b></p> <ul style="list-style-type: none"> <li>Integrated waste management of solid wastes and discharges into the lake</li> <li>Reduce point source pollution by strengthening industrial and municipal waste management in urban and industrial centres</li> <li>Promote regulations to reduce and control pollution from mines</li> <li>Promote farming methods that reduce use of pesticides, herbicides and fertilizer</li> </ul>	<p>Reduced area of lake experiencing anoxia at any depth  Increased tonnage of human and animal waste properly disposed and treated</p>

## Prioritised Strategies for Policy Area 2 - Production and Income Generation

<b>Cross-cutting Strategies</b>	<b>Indicators</b>
<p><b>1 Improve infrastructure</b></p> <ul style="list-style-type: none"> <li>Enhance and maintain road, water transport, communication and energy network</li> <li>Mobilize diversified funding and management of infrastructure, i.e. encourage government, private sector and community partnerships</li> <li>Encourage energy efficiency and use of alternative sources of energy</li> <li>Improve safety of navigation</li> </ul>	<p>Increase in annual investment in infrastructure development (by type)</p>
<p><b>2 Improve institutional, regulatory framework and capacity</b></p> <ul style="list-style-type: none"> <li>Encourage efficient and cost effective utilisation of natural resources in the region</li> <li>Improve marketing systems and inculcate business culture</li> </ul>	<p>Increase in number of paid work positions exceeding poverty rate</p>
<p><b>3 HIV/Aids</b></p> <ul style="list-style-type: none"> <li>Implement strategy to fight HIV/AIDS impact on production and productivity, as the majority of those affected are productively active members of the society</li> </ul>	<p>HIV prevalence in the productive age group AIDS sick/dead in the productive age group</p>
<b>Sector Strategies</b>	
<p><b>1 Promote exploitation of resources potential</b></p> <ul style="list-style-type: none"> <li>Promote exploration and exploitation of mineral and other resource potential</li> <li>Use environmentally sound technologies</li> <li>Ensure that proceeds trickle back to the region for development</li> <li>Encourage eco-tourism among locals and foreigners</li> </ul>	<p>Increase in number of new industrial and mining establishments/investments</p>
<p><b>2 Improve research and development facilities</b></p> <ul style="list-style-type: none"> <li>Reduce dependence on seasonal rains</li> <li>Increase soil fertility</li> <li>Reduce post harvest losses</li> <li>Introduce more appropriate technologies in farming and fisheries</li> </ul>	<p>Increase in number of specialists assisting local people and communities (extension services)</p>
<p><b>3 Improve access to natural resources</b></p> <ul style="list-style-type: none"> <li>Ensure equal opportunity for all in accessing natural resources</li> <li>Support women participation in fishing and mining</li> <li>Check unfair competition and excesses of middlemen</li> <li>Encourage value addition by processing at source</li> </ul>	<p>Number of women in fishing and mining</p>

## Prioritised Strategies for Policy Area 3 - Living Conditions and Quality of Life

<b>Cross-cutting Strategy</b>	<b>Indicators</b>
<p><b>Vulnerability and poverty alleviation</b></p> <ul style="list-style-type: none"> <li>• Develop and implement programs to alleviate poverty and increase employment opportunities Inter alia by <ul style="list-style-type: none"> <li>○ integrating environmental issues into poverty reduction interventions</li> <li>○ establishing economic policies favouring the informal sector.</li> <li>○ creating, promoting and strengthening credit provision</li> <li>○ designing and implementing low-cost housing programs</li> <li>○ improving productivity of small-scale farmers/ fishermen, and reducing post harvest losses</li> </ul> </li> <li>• Minimise vulnerability to rainfall variability by increasing investment in smallholder irrigation, commercialisation of agriculture and livestock and mitigating floods</li> </ul>	<p>Increase in number of people with earnings above poverty level</p> <p>Decrease in number of communities without adequate food sources and storage capacity</p>
<b>Sector Strategies</b>	<b>Indicators</b>
<p><b>1 Water supply and sanitation</b></p> <ul style="list-style-type: none"> <li>• Support community participation in planning, construction and management of their water supplies</li> <li>• Improve safe water supply coverage in rural and urban areas</li> <li>• Support campaigns to protect water sources from contamination</li> <li>• Enforce construction and use of sanitation services/facilities</li> </ul>	<p>Increase in number of communities with safe and clean water</p> <p>Increase in number of communities with proper sanitation</p>
<p><b>2 Health services</b></p> <ul style="list-style-type: none"> <li>• Strengthen health programs targeting HIV/AIDS <ul style="list-style-type: none"> <li>○ institutionalise testing and counselling</li> <li>○ provision of support for affected and infected</li> <li>○ strengthen awareness campaigns, sensitisation and capacity building on HIV/AIDS to communities</li> </ul> </li> <li>• Strengthen health programs targeting malaria and communicable diseases <ul style="list-style-type: none"> <li>○ education programs on preventive health care</li> <li>○ sensitisation and health education campaigns on disease prevention, immunisation</li> <li>○ increase access to safe water</li> </ul> </li> </ul>	<p>Increased number of communities with acceptable participation in HIV/AIDS programs</p> <p>Increased number of communities with access to acceptable health care Decrease in infant mortality rate</p> <p>Improved nutritional status of households</p>

<ul style="list-style-type: none"> <li>• Develop policies to improve nutritional standards</li> <li>• Provide affordable and accessible quality health care, facilities and trained staff, especially in rural areas</li> </ul>	
<p><b>3 Education and training</b></p> <ul style="list-style-type: none"> <li>• Rehabilitation and construction of new schools</li> <li>• Promoting private investments in education</li> <li>• Promoting vocational training institutions and skills development with particular emphasis on young people</li> <li>• Promoting adult literacy programs</li> <li>• Promoting and supporting girl – child education</li> </ul>	<p>Increase in number of communities with full education capacity for all young people</p>
<p><b>4 Infrastructure</b></p> <ul style="list-style-type: none"> <li>• Encourage community participation in rural feeder road construction and maintenance</li> <li>• Promoting private sector investment in provision of telecommunication and internet services</li> <li>• Promoting alternative sources of energy</li> </ul>	<p>Increase in feeder road network</p>

## Prioritised Strategies for Policy Area 4 - Population and Demography

<b>Sector Strategies</b>	<b>Indicators</b>
<p><b>1 Population growth and migration:</b></p> <ul style="list-style-type: none"> <li>• Carry out information, education and communication campaigns to sensitise communities and policy makers on the interrelationship between population, environment and sustainable development</li> <li>• Support family planning and reproductive health schemes</li> <li>• Integrate population issues in development planning</li> <li>• Improve economic and employment opportunities and develop entrepreneurial/ vocational skills for rural and fisher folk</li> <li>• Address conflicts in the Great Lakes Region</li> <li>• Strengthen health programmes focusing on communicable diseases including Malaria</li> </ul>	<p>No. of communities sensitised No. of programmes carried out</p> <p>Increase in number of communities with access to family planning services No. of development plans integrating population issues Reduced urban in-migration</p> <p>Reduced cases of conflicts Increased No. of refugees going home</p> <p>Reduced prevalence of communicable diseases</p>
<p><b>2 Change cultural and social behaviours and practices</b></p> <ul style="list-style-type: none"> <li>• Carry out campaigns and initiate programmes to sensitise communities on causes and implications of HIV/AIDS and STIs</li> <li>• Initiate and strengthen HIV/AIDS intervention programs targeting transient communities – fishermen and long distance truck drivers</li> <li>• Legislate against retrogressive cultural practices and behaviours, which promote spread of HIV/AIDS (e.g. wife inheritance, female circumcision)</li> </ul>	<p>No. of communities sensitised No. of programs carried out</p> <p>No. of legislations enacted</p> <p>Reduced incidences of retrogressive practises</p>



## Prioritised Strategies for Policy Area 5 - Governance, Institutions and Policies

<b>Cross-cutting Strategies</b>	<b>Indicators</b>
<p><b>1 Good governance and human rights</b></p> <ul style="list-style-type: none"> <li>• Establish and strengthen appropriate anti-corruption measures and strengthen procedures and regulations that ensure transparency/openness</li> <li>• Create awareness and promote access to the public on constitutional and human rights and institutionalise respect for human rights</li> <li>• Strengthen laws on the rights of the child with particular emphasis on orphaned and vulnerable children</li> <li>• Implement provisions of good governance included in the EAC Treaty</li> </ul>	<p>Decrease in instances of corruption</p> <p>Decrease in cases of human rights violations</p> <p>Increased number of communities with access to legal and civil rights specialists</p>
<p><b>2 Harmonisation of laws and policies</b></p> <ul style="list-style-type: none"> <li>• Formulate policies that address sustainable development and poverty eradication</li> <li>• Revise, amend and harmonise existing policies and existing obsolete laws across states, including local authority by-laws</li> <li>• Promote inter-governmental co-ordination</li> </ul>	<p>Number of laws harmonised and amended</p>
<p><b>3 Institutional framework and devolution</b></p> <ul style="list-style-type: none"> <li>• Develop community programs to promote participation in decision making</li> <li>• Streamline guidelines for resource mobilisation</li> <li>• Study and update existing laws in respect of financial decentralisation and resource allocation</li> <li>• Strengthen local government institutions to actively involve people and promote the participation of youths in development planning</li> <li>• Strengthen consultation processes with communities in planning</li> <li>• Support awareness campaigns on community resource management and control</li> <li>• Promote positive social and cultural values towards education and training for the youth for gainful employment</li> <li>• Promote participation of civil society organisations in decision making related to local development</li> <li>• Strengthen capacity of existing institutions such as local government, judicial instruments, cultural institutions and communities</li> <li>• Analyse the situation and develop capacity building programs</li> </ul>	<p>Increased number of community development plans meeting (regional) standards</p>

<p><b>4 Law enforcement and security</b></p> <ul style="list-style-type: none"> <li>• Strengthen the capacity of the Judiciary to administer law and to empower communities to promote justice with fairness and efficiency to protect human rights at local and central level</li> <li>• Formulate and implement security measures on the lake</li> <li>• Address cross-border crime, agree and implement anti cattle rustling measures</li> </ul>	<p>Increase number of communities with an acceptable level of law enforcement</p>
<p><b>5 Conflict resolution and peace building</b></p> <ul style="list-style-type: none"> <li>• Set up institutional framework and mechanisms for conflict resolution and peace building (e.g. co-ordinated patrols, link with Safety of Navigation recommendations)</li> </ul>	<p>Increased number of mechanisms established</p>
<p><b>6 Gender issues</b></p> <ul style="list-style-type: none"> <li>• Gender equality should be reflected in all development and sector plans</li> <li>• Re-address lost value systems in relation to gender</li> <li>• Promote positive gender relations through shared gender roles for sustainable family and community development</li> <li>• Capacity building through civic education with emphasis on participation in leadership</li> </ul>	<p>Raised positive awareness of gender roles in the family and community</p> <p>Increased gender balance in leadership and decision making</p> <p>Increase number of women in leading positions</p>

## **Recommendations and Conclusions**

The Vision and Strategy Development Project has addressed the situation in the riparian countries only. It is recommended that all countries within, or bordering to, the lake basin should be included in the next stages of developing of strategies and action plans. The situation in Rwanda and the situation in Burundi both cast major influences on development trends in the lake and its catchment. The two countries, as well as the relevant partners within the Nile Basin Initiative/NELSAP, should be included in the follow-up to the current study.

The formulation of complete strategies and detailed action plans for each policy area should include combining prioritised strategies from two or more policy areas into cross-cutting strategies – or Strategy Packages. These cross-cutting strategies provide a basis for broader (regional) development programmes and integrated Lake basin management, e.g. in line with the National Poverty Alleviation Strategies/Action Programs. Cross-cutting strategies are particularly important for capturing the different aspects of sustainable development as broadly as possible and for mobilising resources across policy areas. Examples of cross-cutting strategies, where inputs will be needed from all or a major part of the five Policy Areas, are:

- Establishing policies and institutions for integrated basin management;
- Developing physical and economic infrastructure;
- Establishing programmes for improved education, training and awareness raising;
- Establishing programmes to confront the HIV/AIDS pandemic including its effects on production and quality of life; and
- Providing clean water and sanitation for all.

The original approach planned for the Vision and Strategy Development Project allowed considerable time for giving feedback to all participants engaged in the process. Due to the various constraints the feedback process has not been carried out. To ensure future engagement, it is important that feedback to the stakeholders at the various levels is given as initially planned. Steps should be taken to ensure that national and regional feedback processes can be realised. Donor support might be sought to ensure that this important element of the vision process be implemented.

In order to follow up and monitor the results of actions taken based on the prioritised strategies, a more detailed follow up on development of indicators will be needed. A system to collect necessary data and statistics for the indicators to be continually monitored should be established and responsibilities for monitoring and reporting be clarified, e.g. by a working group of members from all partner states representing Focal Ministries, Bureaus of Statistics and relevant research institutions and agencies active in the lake basin.

Further strategy development should take into consideration the massive capacity building that has taken place through the vision and strategy development process. More than 12,000 people have participated in the process in workshops, and

approximately one hundred have contributed to the process as members of National or Regional Task Forces or consultant teams. This unique capacity and knowledge base should be utilised for the follow-up work that should be carried out. In particular it is important to maintain the core of NTFs and RTF in the capacity of standing task forces, policy working groups or 'think tanks'. Highly experienced with this type of processes, such groups could have the responsibility of following up the strategy development, monitoring the development of indicators, and suggesting corrective action.

## 1. INTRODUCTION

### 1.1. Introduction

Lake Victoria is the world's second largest fresh-water lake and the largest in Africa, with a surface area of 68,800 km<sup>2</sup>. It has a volume of 2,760 km<sup>3</sup> and an average depth of 40m. Maximum depth is 80 m. The lake is shared between Kenya (6%), Tanzania (51%) and Uganda (43%). Lake Victoria is situated in an elevated depression approximately 1100 meters above sea level, surrounded by highlands and the two forks of the Rift Valley. Highlands and the Mitumba Mountain Range on the west with other Rift Valley Lakes, mark the division with the Congo River Basin. To the south are high plains of central Tanzania, and the White Nile River leaves Lake Victoria to the north through the hilly terrain of Uganda.

The lake basin area covers 193,000 km<sup>2</sup> with Tanzania occupying 44 per cent, Kenya 22 per cent, Uganda 16 per cent, Burundi 7 per cent and Rwanda 11 per cent. Eighty two percent of the water entering Lake Victoria comes from precipitation directly falling on the lake surface with stream-flow and basin runoff contributing just 18 percent (COWI 2002). It is estimated that 80 percent of the outflow evaporates; leaving 20 percent to flow down the Nile. The size of the lake makes it vital for weather and climate modulation in the region.

Lake Victoria Basin has a population of about 30 million people of which approximately 25 million live in the three riparian states. i.e. about 30 % of the total population of the three countries.

The lake basin is endowed with rich natural resources and provides food and water for domestic, agricultural and industrial use. Utilisation of its resources gives employment opportunities and sources of income, provides hydropower generation and networks of transport and communication. The East African Community has recognised the vast potential for economic development that exists within the lake basin and has declared the area as a Development Zone. Strategies are developed to foster economic growth in the basin (EAC Development Strategy 2001-2005).

More than 80% of the population in the lake basin are engaged in agricultural production, the major part as small-scale farmers of livestock keepers producing maize and cash crops such as sugar, tea, coffee, cotton and meat. The fish resources of the lake provide – directly or indirectly – living for about 3 million people engaged in subsistence, artisanal and commercial fishing. The fisheries are very important as a source for foreign exchange earnings with an annual landed value of 300-400 USD.

At the same time the lake is the final recipient of human and industrial wastes and eroded soils from natural and human-initiated processes in the basin. The multiple activities in the lake basin have increasingly come into conflict due to several negative trends and driving forces, often working in combination.

*Population pressure* in the lake basin is high with an annual growth around 3 per cent putting serious strain on natural resources as well as on the provision of welfare and public services throughout the basin. Resource pressure and lack of

employment in the rural areas give rise to extensive migration to the urban areas of the basin. Civil strife and unrest in neighbouring countries add to this situation. The rapidly increasing population also contribute to the existence of “hot spots” of pollution and environmental degradation caused by human waste, urban runoff, effluent discharges from industrial activities and processing of fish and agricultural produce.

*Ecological threats* materialise as continued contamination and eutrophication of the lake caused by inflow of residues from use of chemical herbicides and pesticides in agriculture, and, increasingly, also from heavy metals from gold mining operations. Nutrients inflow has given rise to five-fold increase in algae growth since 1960s causing de-oxygenation of the water that threatens the survival of deep water-fish species. Unsustainable utilisation of major wetlands areas through agricultural activities and livestock keeping has greatly compromised the buffering capacity of the wetlands. Introduction of exotic species like the Nile Perch and Nile Tilapia, combined with the use of unsustainable fishing practices and gears, has altered the species composition of the fauna and flora of the lake and led to loss of biodiversity and locally favoured fish species.

*Widespread poverty* is found throughout the lake region and is particularly eminent among the rural population and in the squatter settlements of the urban centres. More than half of the lake basin population is living from an income of less than 1 USD per day and relying heavily on subsistence production. Non-income poverty has also taken root among the low income groups as a result of many factors ranging from illiteracy and low skills, lack of financial capital and credit facilities, inadequate physical and social infrastructure, to cultural norms and beliefs less fit to meet the present changes and challenges. Poor people often engage in subsistence activities that do not take proper cognisance of environmental management and conservation.

*Mortality rates* are high in the lake basin. Tuberculosis and waterborne diseases like malaria and bilharzias are widespread. Access to health services is inadequate and health facilities are also commonly inefficient. Malnutrition is also evident among children in the region and adds another factor to the high mortality rate among children.

*High incidences of HIV/AIDS* add severely to the worsening of the health situation. The emergence of the HIV/AIDS pandemic and the high incidences recorded in the lake basin has impacted negatively on health conditions as well as on the general socio-economic development situation.

Although aware of the nature and impact of HIV/AIDS, many people have yet to change their social behaviour in relation to the root causes of the spread of HIV/AIDS. The pandemic has consequently claimed a rising share of the productive segment of the society, leaving behind an increasing number of orphans and destitute elderly without family support.

## **1.2. Project background**

The Lake Victoria Basin is considered one of the most important shared natural resource by the Partner States of East Africa. Initially, much of the donor interest focused mainly on the lake, fisheries and fisheries management, ecology, biology, hydrology, water pollution and related natural science concerns. Over time a growing understanding emerged of the need to co-ordinate the many fragmented projects in the area. Despite this, there was weak regional policy framework and lack of agreements on management of the common resources in the lake basin. This resulted in increased level of interest to jointly develop and manage the resources to secure its ecological and economic health.

Joint management of Lake Victoria Basin as a shared ecosystem can be traced back to the recommendations in Agenda 21, following the Rio Summit of 1992. Informal discussions started immediately after the United Nations Conference on Environment and Development (UNCED) in Rio (Agenda 21) with an aim of broadening regional cooperation in environmental management and social issues affecting the Lake Victoria Basin. This culminated in the establishment of the Lake Victoria Environmental Management Project (LVEMP) through a Tripartite Agreement signed on 5<sup>th</sup> August 1994 in Dar es Salaam, which paved the way for both the preparation and implementation of the first phase of the project. This was closely followed by the signing of the Lake Victoria Fisheries Organisation (LVFO) Convention in 1996. These developments coincided with the revival of the East African Co-operation in 1996, which resulted in a number of milestones, viz.,

- The first EAC Development Strategy, 1997-2000, which designated LVB as an economic growth zone in recognition of the economic potential therein.
- The commissioning of a study on institutional and legal framework for the management of the LVB in 1999 which culminated in the establishment of the Lake Victoria Program Unit at EAC Secretariat.
- Signing of the Treaty Establishing EAC, on 30<sup>th</sup> November 1999, which provided the legal basis for the establishment of a body to manage LVB (Article 114, of the Treaty).
- The commissioning of a study on Economic Potentials and Constraints in the LVB in 2000 to provide a conceptual basis for developing a strategy for the Basin.
- The signing in, April 2001, of the Partnership Agreement between EAC and Development Partners and the establishment of the Partnership Consultative Committee to guide future interventions in the Basin.
- The development of a Protocol for sustainable management and development of the LVB in 2002.

The LVEMP Regional Policy Steering Committee's decision of May 2001, that EAC spearheads the vision and strategy development process on Lake Victoria, was later adopted by the Committee on Lake Victoria Development Program (CLVDP). Recognising that there existed specific visions in the Basin – not least, those of LVFO and LVEMP, among others – the CLVDP mandated the EAC to ensure that the vision and strategy framework developed was broad enough to accommodate all present and future actors in the Basin. The vision and strategy framework development for the LVB has, thus, been implemented in recognition of the need to create harmony in



interventionist approaches both to eliminate duplications and overlaps and to ensure full participation by stakeholders. This exercise was done simultaneously by the respective NTFs in all three countries then reviewed and harmonised by RTF. The task has been accomplished between November 2001 and August 2003, with major hitches and breaks in between occasioned by several organisational challenges.

Realisation of the great potential for healthy and sustainable socio-economic and environmental development of Lake Victoria Basin lies in combined efforts and integrated management of common resources across sectors and national boundaries.

### **1.3. Objectives**

The overall objective of the vision development process was to assist stakeholders across the lake basin to:

- i) Develop broad consensus on realistic, achievable objectives and indicators for sustainable management of Lake Victoria in a time frame of 15 years; and
- ii) Develop mechanisms that will enable stakeholders to advocate their interests, provide feedback to government, and monitor progress towards achieving goals.

Throughout the process of the project the stakeholders across the lake basin have been able to identify achievable and realistic strategies for actions, as well as ways to gauge and monitor progress towards realizing such goals. Therefore the Lake Victoria Basin stakeholders should be one step closer to commonly address the great environmental, social and economic challenges facing the lake basin.

A large number of stakeholder groups in the three riparian countries have been involved in this process – fisher folk and their communities, fish processors and traders, farmers, representatives of the business community, conservationists, local authorities and central government. A major task has been to involve women and youth in the process, as individuals or as representatives of various organisations, NGOs or CBOs. This approach opens for a wide diversity of stakeholders to work communicate and collaborate in the effort to make the lake basin a healthy, sustainable and varied ecosystem which can support the many human activities that depend upon the Basin resources.

The results of the vision process will also provide inputs to other ongoing and future activities in the lake basin with particular reference to phase 2 of LVEMP and the Nile Basin Initiative (NBI). It has been essential that the vision and strategy development project is firmly rooted in and supported by high-level national and regional institutions in order to establish a commonly shared policy framework for future resource management and investments in the basin. A shared vision of the future is also regarded a precondition for ensuring co-ordinated collaboration from donors in their envisaged support for a more sustainable and effective management of the lake resources.

#### **1.4. Overall values and principles**

The long-term strategic goal for the vision process has been to develop an enabling environment that will encourage stakeholders in the Lake Victoria Basin to work together to sustain a healthy and varied lake basin ecosystem, which is healthy, dynamic and complex and that can support the many human activities in the catchment. Important milestones in the vision process have been to:

- Formulate a shared vision and a strategy framework and agreed to priority objectives that are realistic and achievable for Lake Victoria Basin in a time frame of 15 years;
- Define monitorable indicators, in order to measure progress towards achieving the objectives of sustainable development;
- Provide background information and guidelines that allow stakeholders to share information and advocate their interests.

The formulation of shared visions and strategies has been based on a set of overall values and principles guiding the process. The overall principles defining the common ('conceptual') model that has been the basis of the processes in the three countries are that visions and strategies will have to meet the basic needs and the desired futures of the people of the lake basin without harming the basin's ecosystem health<sup>1</sup> and depleting its natural resources. In short: an approach with a clear *pro-poor* and *pro-environment* orientation.

#### **1.5. The conceptual model**

The formulation of a shared vision for the lake basin has been based on the set of values and principles for sustainable development that also encompass the issues of poverty alleviation and equity. The overall analytical model aims at conceptually linking the closely interlinked tenets of sustainable development: Ecosystem health, quality of life and economic development as highly reciprocal processes. In a situation of rapidly growing populations, as is the case throughout the lake basin, it is imperative also to add on the demographic dimension: the need to have a demographically 'healthy' population able to meet with future challenges in production, life and education.

The overall conceptual (or analytical) model defined five, broadly interlinked policy areas that will have to be simultaneously addressed to formulate comprehensible and sustainable development strategies for the lake basin:

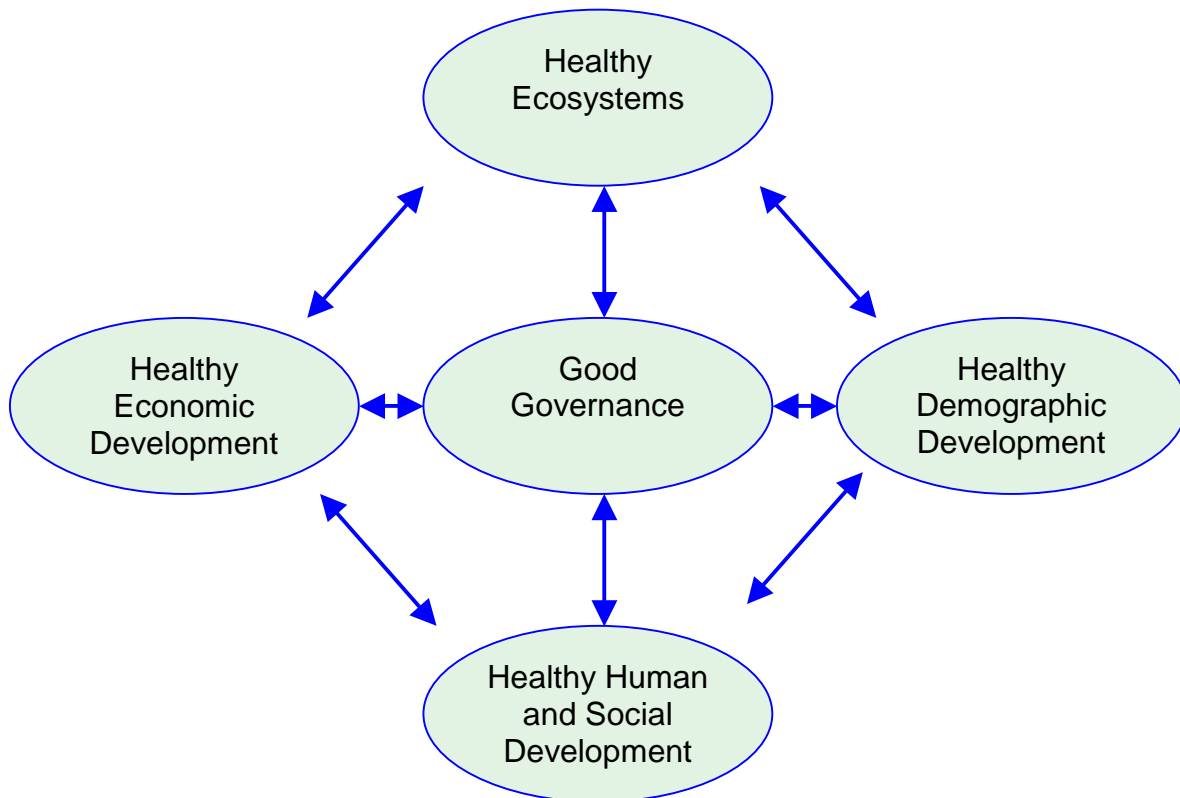
- Ecosystems, Natural Resources and Environment (resource management, protection and conservation);
- Production and Income Generation (natural resources utilisation);
- Living Conditions and Quality of Life (income and poverty, social services, health and education);

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<sup>1</sup> Ecosystem health is advocated widely as a useful and essential concept in ecological policy but have a variety of definitions. There is no universal conception of ecosystem health. Here we have adopted the definition of Karr and Chu (1999) who define ecosystem health as "*the preferred state of ecosystems modified by human activity*". As such it is encapsulated by our conceptual mode as part of sustainable development. For a further discussion on the concept see Lackey (2001).

- Population and Demography (population development and migration);
- Governance, Institutions and Policies (development and harmonisation of policies, institutions and implementation machinery).

Policies, strategies and actions designed to meet the needs of a specific sector should always be evaluated in light of their direct and indirect impacts *outside* the sector. Some driving forces and impacts, e.g. the HIV-Aids endemic and gender issues, are in fact crosscutting all socio- economic sectors. Therefore, *institutional and governance* aspects are closely linked to the question of more equitable, pro-poor sustainable development. The fifth policy area, in general terms labelled *Governance, Institution and Policies*, is cutting across the other four policy areas. Governance issues constitute a policy area in itself when addressing needs for development of new legislation, the revision, overhaul and harmonisation of existing legislation and the strengthening of institutional capacity. All these areas are further discussed in lieu of the main objectives of the EAC Treaty. The policy areas represent the interlinked 'spheres' of sustainable development as illustrated in Figure 1.



**Figure 1 Sustainable Development as interlinked processes.**

## 2. ORGANISATION AND METHODOLOGY

### 2.1. Project Organisation

A wide range of regional and national institutions has participated in the visioning process in addition to the very broad involvement of stakeholder groups at different levels. The main actors have been

*East African Community (EAC)* has been the client of the project with the overall responsibility for the vision and strategy development process in particular in relation to the appointment and operations of the Regional Task Force.

*The World Bank (WB)* has been responsible for the initial project preparations (ToR, contract partner) and for administrating the funds contributed by NORAD. The bank also commissioned National consultants to assist the National Task Forces.

*Regional task Force (RTF)*, appointed by EAC, has been responsible for preparation of the regional vision and strategies based on inputs from the National Task Forces. The RTF have comprised representatives from the government ministries and agencies in the three partner states, regional organisations, NGOs and business community, as well as development partners.

*Focal Ministries.* In each partner state there has been a focal ministry with overall responsibility for appointing the NTFs and to oversee and monitor the national processes. In Kenya this has been Ministry of Environment and Natural Resources (to December 2002) and Ministry of Water Resources Management and Development (from January 2003), in Tanzania Vice Presidents Office and in Uganda the Ministry of Water, Lands and Environment. The Focal Ministries were also represented in the Regional Task Force.

*National Task Forces (NTF)*, appointed by the respective Focal Ministry, were established in each country responsible for the implementation of the national level processes, i.e. the identification of and consultation with stakeholders and sector representatives and the final formulation of national visions and strategies. The NTFs have comprised of representatives of central and local government, representatives of local communities, business, civil society organisations and NGOs.

*National Consultants (NC)* were commissioned by the World Bank to act as secretaries and co-ordinators for the NTFs and to liase between the NTFs and the International Consultant.

*International Consultant (IC)* has been responsible for facilitating the vision and strategy development process, for providing baseline data and professional support to the RTF and NTFs, in particular with regard to overall approach, methodology and work plan. The IC has assisted in the organisation and implementation of stakeholder consultations and the development of national and regional visions and strategies.

The International Consultant has been Statkraft Grøner (Norway) in association with Norwegian Institute of Urban and Rural Research (Norway), Cornell University (USA), Dar es Salaam University College of Lands and Architectural Studies

(Tanzania), Makerere Institute of Social Research (Uganda) and Agrechs Development Consultants (Kenya).

### 2.1.1. Stakeholders and institutions involved

The vision and strategy development has aimed at broad representation from local communities, central and local government, the private sector and business community, the academic society, NGOs and CSOs.

The stakeholder consultations processes were designed to secure broad representation from local communities, local government and councils, local and regional private sector and business organisations. At local community level, the stakeholder consultation workshops included farmers, fisher-folks, traders, youth and women groups, as well as local (village) leaders.

At the national level stakeholder consultations were primarily conducted as sector interviews or focus groups interview (e.g. Permanent Secretaries, Commissioners, Chief Administrative Officers for the lake basin districts, (environment, community development, forestry etc.), Academicians, Media, Donors, Embassies, national NGOs and CSOs.

## 2.2. Methodology and implementation

### 2.2.1. Definitions

A *vision* is defined as:

“A qualitative statement of the broad *direction* which development of Lake Victoria and the lake basin should take and the desired (long-term) *destination*, i.e. an indication of where we would like to see the situation in the whole Lake basin in, say, the year 2015”.

A *strategy*<sup>2</sup> is what links a vision to action:

“A strategy builds on the vision and consists of a set of agreed overall *objectives* and *targets* [result indicators]. A strategy is normally not very detailed and will need to be made operational in a set of prioritised [strategic] *action programs*”.

### 2.2.2. General Methodology

The process of formulating the overall vision, objectives (‘sub-visions’) and strategies has been a consecutive and interlinked process consisting of six main phases:

1. Process initiation
2. Baseline study, dissemination and exchange of information
3. Stakeholder consultations
4. Formulation and harmonisation of national visions and strategies

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<sup>2</sup> There is no general agreement on the substantive content of the terms ‘vision’ and ‘strategy’ (and their internal relationships). The definitions used here are typical ‘mainstream’ definitions as found in typical development literature (e.g. *A Shared Vision for County / City Development Systems*, Ministry of the Environment and Local Government, Republic of Ireland , 2000).

5. Formulation and harmonization of a regional vision and strategies
6. Development of indicators and methods of monitoring

### 2.2.3. Implementation

With some local variations and adjustments the national processes were implemented along the following procedure:

#### *(1) Baseline study, dissemination and exchange of information*

At start of the visioning process the International Consultant prepared a Baseline Report based on field visits to the lake basin area and literature studies. Written information about the process and the five policy areas were distributed to the NTFs.

#### *(2) Identification of stakeholders*

The National Task Force identified key stakeholder groups to be involved in the process at different levels. At village level participants were selected to represent the most typical economic activity in the actual area e.g. fisherfolk, farmers, pastoralists. Special efforts were made to engage women and youth groups.

#### *(3) Sample procedures (villages and districts)*

District and village *samples* were selected for stakeholder consultations and focus groups interviews. Sampling criteria were variations in economic activities, ethnicity and socio-cultural settings. The resulting number of villages and districts chosen varies somewhat between the countries, and, all in all, makes up a *typical* rather than a strictly statistically representative sample of the Lake basin population.

#### *(4) Capacity building and training*

All NTFs undertook training activities to familiarise the members with the tasks. Training of facilitators/facilitating teams for the stakeholder consultation (village) workshops was an important part of project preparations. Facilitators were drawn from district and village authorities and local organisations (CSOs and NGOs). Capacity building and training took place at district level during the preparations for the fieldwork at village and community level. The training included introduction of facilitation tools and methods as well as making NTF members and facilitators acquainted with baseline information.

#### *(5) Village (ward/community) workshops*

Workshops at community level were the major activity of stakeholder consultations. In the sample localities selected workshops lasting from 2 to 5 days were held with local stakeholder representatives, village leaders and officers, religious leaders, women groups and CSOs. Focus groups interviews were also used to reach specific stakeholder groups.





**Photo 1: Defining threats and challenges, setting priorities and visions for the future at Wakawaka Village workshop, Uganda (by Tore Hagen).**

A series of participatory techniques and approaches were used to facilitate discussions of the present situation, visions, priorities and strategies.<sup>3</sup>

With local variations, the workshops normally progressed in the following steps:

- Description of the present situation with particular focus on threats and challenges to the environmental, social and economic conditions of the community, based on the personal experience of the participants and the general knowledge base.
- Formulation of stakeholder (group) visions and harmonisation of visions across stakeholder groups.
- Formulation of priorities and proposed strategies needed to achieve the vision (the “road” from the present situation to reach the desired futures (visions))
- Identification of indicators to gauge, monitor and evaluate change.

A “harmonisation matrix” was used to capture, summarise and report stakeholder opinions. The matrix defined a common framework and checklist to sum up stakeholders’ conclusions. Table 1 shows the matrix as used at the regional level later in the process.

<sup>3</sup> Some of the specific tools used were “Historical Transect Analysis”, “Mobility maps”, “Livelihood Analysis” and different (flip chart) methods for setting priorities.



**Table 1 Harmonisation Matrix.**

Policy areas	A Threats	B Priorities	C Strategies	D Indicators
1 Ecology and natural resources				
2 Production				
3 Quality of life				
4 Demography				
5 Governance and policies				

*(6) Sector Interviews*

Partly in parallel to the village workshops the NTF conducted supplementing interviews with key informants of specific sector ministries, government institutions and other relevant stakeholders at district and national level.

*(7) Cross-Village Workshops*

These workshops were undertaken under different headings (District Forum, District/Village Workshops, Sample Village Forums), but with the common aim to harmonise inputs from community level workshops within each district. The village workshops elected from among their participants 2-3 representatives to the district workshops that also convened local authority officials, district level officers and representatives of CSOs and NGOs. Using the matrix format the district workshops summed up inputs from the local level and prepared material for the subsequent national workshop.



**Photo 2: From Mayuge district workshop, Uganda (by Tore Hagen).**

#### *(8) National Workshops*

National level workshops were held in all these countries to harmonize the visions on a national level. The format and content of the National Workshops were adjusted to the outcomes and requests of the local processes. The workshop was attended by selected participants from the village and district level processes as well as representatives from the private sector, focal ministries, national environmental and land use agencies, NGOs and civil society representatives and the media. The outcomes of the national workshops were presented in the three National Reports annexed to this report.

Table 2 below summarises some data on the activities of the NTFs:

**Table 2 Villages/local communities visited (workshops held) during the national processes.**

	Kenya	Tanzania	Uganda
Number of villages/local communities visited (workshops held):	66	31	10
Name of districts where the villages are located	Kisumu, Bondo, Kakamega, Busia, Trans-Nzoia, Suba, Kericho, Gucha, Migori, Nyando, Rachuonyo	Mwanza Reg: Mwanza city, Misungwi, Geita, Magu; Kagera Reg: Bukoba urban, Bukoba rural, Muleba (mainl. and island); Mara Region: Musoma urban Serengeti, Tarime; Bunda	Kampala, Bugiri, Rakai, Mayuge Mubende
Approximate number of participants in village workshops (average/total)	130 (8000)	50 (1500)	185/1865
Number of Lake basin districts represented at the district workshops (no/total)	11/29	18/18	5+/17
Approximate number of participants in district workshops	330	120 (40x3)	200
Approximate number of participants in the national workshop	60	95	85

### *(8) Regional Workshops*

The Regional Task force conducted workshops where the mandate of the RTF was defined:

- To provide the strategic linkage with EAC;
- Harmonise contributions from national processes including the final vision and strategy development process;
- Ensuring that NTFs implement the processes properly
- Confirm that feedback mechanisms are taking place.

RTF discussed and decided on the necessary revisions and adjustments in the methodology and time schedule for the vision and strategy process.

### *(8) Regional Harmonisation*

A regional workshop with broad representation from the RTF, NTF and additional stakeholders was held to initiate the process of harmonising visions,





- *Country Reports* presenting the National Visions and Strategy Frameworks, and summarizing the National visioning processes in the three countries (Annexes II – IV).

### **2.3. From vision to action**

The development of the vision and the strategy framework has been a participatory and ‘bottom-up’ development process with fundamental inputs from stakeholder consultations at community, district and national level.

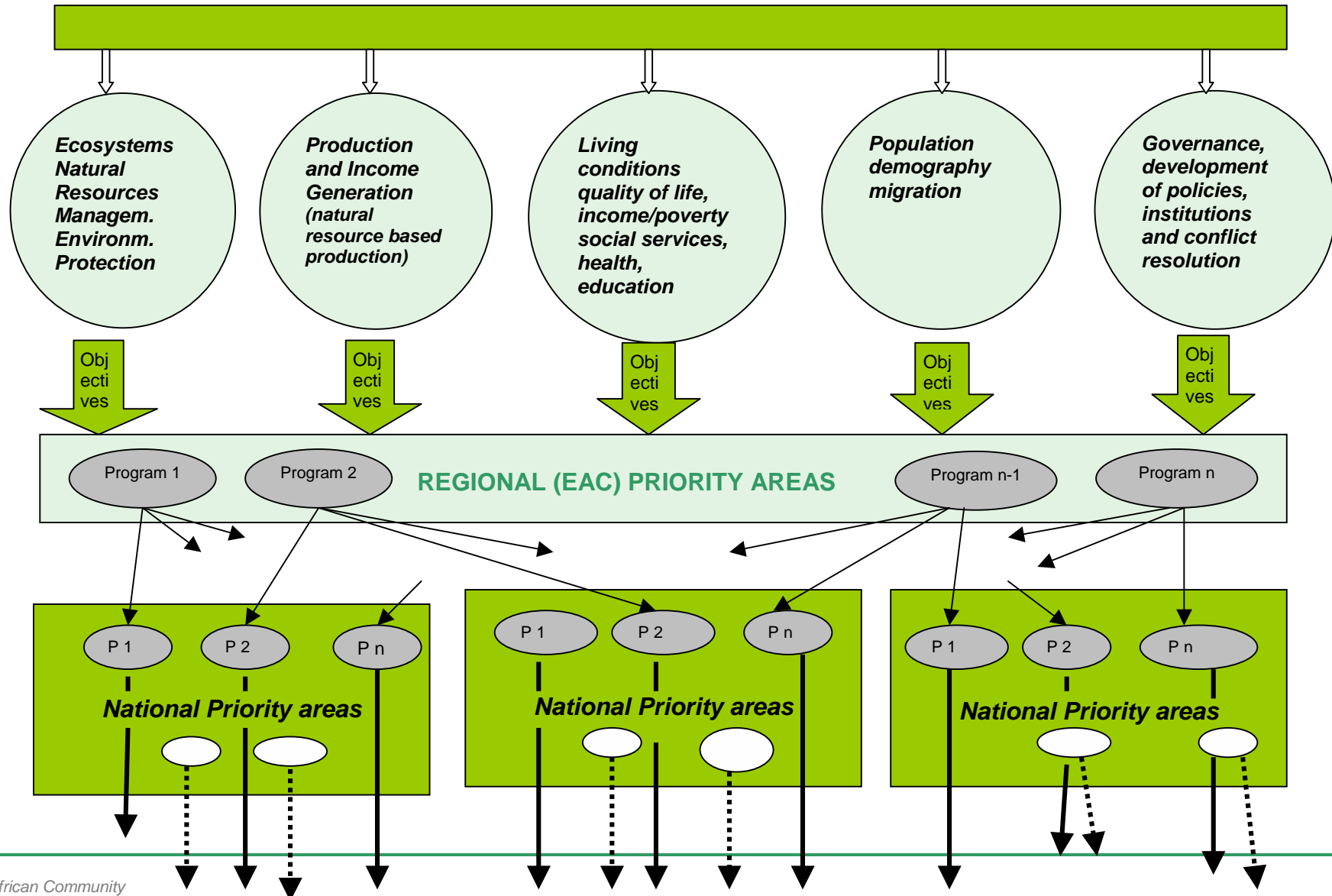
As the visions and strategy framework is adopted by the EAC, a process of feedback will have to be established, i.e. the need to develop processes of monitoring, measuring and providing feedback on easily understandable and observable indicators of change, based on input from stakeholder consultations and sector interviews.

When the strategies for further development are implemented, it will be a reversed process of the visioning process. Figure 4 shows that the process of strategy development should be linked to a shared and harmonised regional vision based on the outcome of the national visions development processes:

- The shared vision gives guidance to the formulation of a set of broad Policy Area Visions for the five policy areas defined by the conceptual model. These sub-visions are further developed into a set of prioritised development objectives for each of the five policy areas constituting a set of agreed regional (EAC level) Priority Areas.
- The regional priorities give overall direction and guidance for the formulation of national policies corresponding to the agreed regional priorities. In addition to programs reflecting regional priorities there may also be a number of additional, individual national priority areas in keeping with the situation in each partner state.
- The priority areas will subsequently be the basis of national development plans and action programs, linking responsibilities for implementation to specific (private or public) institutions in the three countries.
- The structural, institutional and contextual differences and variances at the national level need to be taken into consideration implementation, enforcement and control machinery in the three countries.

In the end – and as the final output of the process – the bottom-up processes will of course meet with top-down priority setting and decision-making processes. Stakeholders’ perceptions, opinions and interests will have to be weighted and balanced at each step as the overall vision materialise in concrete action. Even though consensus should be sought, one has to expect that this exercise will expose conflicting and contradictory interests and priorities, where political decisions will be needed to decide the course.

Figure 3. The Vision and Strategy Framework; sequential phases in the process of strategy formulation.



## 2.4. Development of Indicators

A great number of indicators exist within the fields of ecology, environmental protection and natural resource assessment as well as for a broad range of socio-economic and demographic development. The recent World Development Report is but one, however typical, example of extensive use of a large set of indicators to measure and compare ongoing change processes across national contexts and social systems.

The development of indicators has been a participatory process and has been defined at the various levels of the stakeholder consultations. It has been undertaken from local up to national level, and from national to regional level. Finally these have been harmonized and synthesised leading to a set of prioritised indicators that are linked to the selected strategies (as reported in Chapter 6).

The prioritised indicators reflect the fundamental values – the *foundation* – on which the visions and priority areas and strategies are based. It implies that indicators has been defined so that they reflect the basic tenets of *sustainability* as described in the overall conceptual model:

- Ecosystem Health,
- Healthy Economic Development,
- Healthy Demographic Development
- Healthy Human and Social Development
- Good Governance.

The indicators also reflect the fundamental principles found of the EAC Treaty as well as declared national policies of *poverty alleviation* and a *pro-poor* orientation of government priorities. The suggested indicators has been designed to adequately capture *state, changes, and impacts*<sup>4</sup> as well as the interlinkages with other components within the lake basin system.

### 2.4.1. Choice of Indicators

The stakeholder consultations defined a wide variety of indicators by which many can be found in Chapter 5. These have been further assembled during regional discussions to make them easily understood so that they can be clearly defined and easy to monitor over time and space (Chapter 6). They have also been ‘translated’ into measurable entities that are possible to collect and analyse without great technical and financial input. The prioritised indicators are therefore presented within each policy area and are linked to the prioritised strategies of relevance.

A majority of the prioritised indicators has been pooled for adoption into monitoring, measuring and evaluating the lake basin development. They have been screened against three criteria for indicator choice, namely; policy and management relevance, technical merit, and practicality. Any indicator overlap or redundancy between policy areas has also been eliminated. To strengthen the set of selected indicators in

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<sup>4</sup> Frequently referred to as CSR indicators: *C*onditions, *S*tresses, *R*esponse



monitoring and measuring the change in the Lake basin development they are a mix of impact and process indicators. As such various and different aspects of development outputs and processes can be measured.

### 3. PRESENT STATUS AND TRENDS

This chapter gives a summary overview of some dimensions of the present status and recorded trends facing the socio-economic conditions in the lake basin for each of the five policy areas. The aim is to present the factual background on which the stakeholder consultations have been based. What is commonly regarded as the most crucial threats and challenges that face the lake basin? What critical issues will have to be confronted in the formulation of a long-term vision and strategies (Chapters 5 and 6) to halt present negative trends?

The information is based on the following sources of data and information:

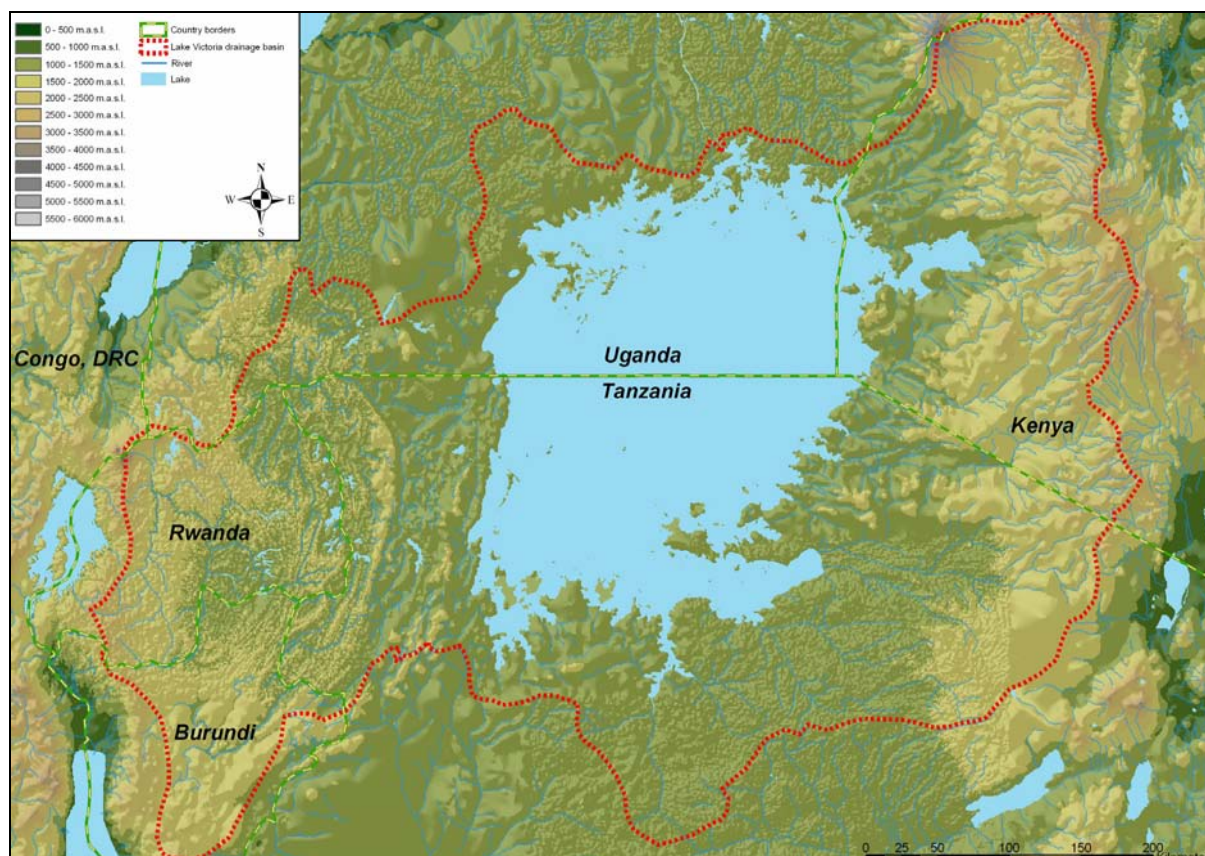
- The Baseline Information Report (Annex I to this report) and Information Packages prepared for stakeholder consultations;
- Policy studies commissioned by EAC on the development of Lake Victoria Basin;
- The three National Reports building on extensive stakeholder consultations in the three partner states;
- Discussions at regional level (Regional Workshop, Arusha and meetings of the RTF, Nairobi/Arusha) summarising and prioritising major threats and challenges that should be faced at the regional level.

As the baseline study was undertaken early 2003 and based on existing information made available to the International Consultant, some of the information and data presented may not be fully updated. The main purpose, however, is not to give a comprehensive, scientific presentation of (all) ongoing environmental and socio-economic processes in the lake basin, but to provide a *reliable overview* of the situation to support the process of targeting major threats and challengers, and formulating visions and priority strategies to tackle them.

#### 3.1. **Ecosystems, Natural Resources and Environment**

The stresses and changes on the ecosystems in the Lake basin have developed in a variety of forms over the years and the effects are numerous. Major threats to ecology and environment are described in the rich research literature on the lake as documented in the Baseline Information Report (pp. 12-16).

The Lake Victoria Basin (see figure 4) is made up of a great variety of ecosystems that provide a wide range of goods and services for the population in the area. For a variety of reasons these ecosystem have, become under increasing pressure that gives rise to considerable concerns. Some of these are increased pressure on resources, losses of habitats and biodiversity as well as increased water pollution and general degradation of the environment.



**Figure 4 Relief map of East Africa and Lake Victoria Basin.**

### 3.1.1. Increased pressure on water resources

Lake Victoria provides the major water source for both urban and rural for domestic, industrial, agricultural and recreational use as well as securing the conservation of biodiversity and ecosystem functioning of large wetland and forest areas. This enormous resource is under serious pressure from ongoing activities in and around the lake. Eighty – two percent of the water entering Lake Victoria comes from precipitation directly falling on the lake surface with stream-flow and basin runoff contributing just 18%. Water inputs to the lake are almost balanced by a large rate of evaporation and a relatively small discharge to the White Nile River. Short-term differences between water inputs and losses have caused a few meters fluctuations in the lake level in years of high precipitation or drought. There are considerable variations in annual rainfall in the catchment area. In the dry areas of the southern parts of the basin most streams and rivers are seasonal and dry out during the dry season.

In the basin as a whole, water resources are unevenly and inadequately distributed leaving some areas depending heavily on rainfall. Boreholes, ponds and wells are inadequately developed; exposing people to contaminated water from unprotected sources. It is estimated that on an overall basis less than 40 % in the rural areas of the lake basin and only somewhat more than one half in the urban centres have access to safe and clean water within acceptable distance. None of the urban centres are able to meet the demand for clean water due to poor water supply infrastructure. Inadequate access to clean and safe water contributes towards water

borne diseases and increased mortality because of higher exposure to diseases like dysentery, diarrhoea and typhoid fever.

### 3.1.2. Habitat losses

Wetlands is one important class of habitat under increasing pressure, suffering from overuse and destruction from an increasing population, economic activities like wood harvesting, shelter construction and removal of material for handicrafts as well as degradation due to abusive practices like waste dumping, increased land runoff pollution, and excavation of sand and clay. Reliable estimates of wetland loss are not available. Some recent remote sensing assessments of wetland change show conversion of wetlands to intensive scale agriculture and acclamation of land for new settlements and road construction. The destruction of forest and wetland ecosystems has important hydrological consequences, leading to increased vulnerability to flood hazards, especially in the floodplains, as well as loss of vegetation cover, poorer infiltration of overland flow, decrease in water purification ability, drop of river volumes during drought periods, and increased erosion and sedimentation in the lake. Also biological communities and their diversity are strongly affected.

### 3.1.3. Loss of biological communities

Lake Victoria has changed from being one of the richest water bodies on earth in fish diversity to a lake dominated by introduced fish species. The lake has always supported subsistence fishing critical for supplying protein to local people, and now a single-species fishery supplying fresh fish to markets mainly in Europe dominates. Introduction of alien species – the most prominent being the Nile perch and the water hyacinth – is believed to be a major reason for the alteration of many communities of aquatic and terrestrial species associated with the lake. Lake Victoria has created worldwide conservation attention because of the disappearance of 200 to 250 cichlid fish species associated with the introduction of the Nile perch in the 1950s. The World Conservation Union (IUCN) has listed hundreds of species endemic to the lake as endangered. However, several major environmental changes contribute to the decline, especially increased nutrient inputs, climate change and over-fishing with fine-mesh nets.

Over harvesting of indigenous tree species and loss of large forest communities to forest plantations, agriculture and settlements have led to a catchment dominated by exotic tree species. These changes have degraded the wildlife that was once supported by indigenous tree species and forest ecosystems.

### 3.1.4. Pollution

Inputs of nitrogen and phosphorus to the lake are largely from atmospheric deposition. The concentrations of these nutrients reflect a mesotrophic status for the open waters of the lake. Nutrient inputs from the land, tributary watersheds, and industrial and municipal sources are not highly influential on whole lake water quality, but give rise to serious eutrophication in some specific lake shore areas. Shoreline areas, gulfs and bays also witness oxygen stress due to nutrient and waste inputs. Although good trends data are lacking, it is widely believed that Lake Victoria is experiencing eutrophication. Heavy metals and industrial contaminants can be found in the lake tributaries, near shore areas and bays. Animal and human waste also cause pollution problems around the lake in urban as well as in concentrated rural settlements.

Outside the urban areas there is virtually no system for disposal of human waste. High population density, operational problems and lack of maintenance make urban sewage systems overloaded and poorly functioning. Untreated human waste is drained directly into streams and rivers eventually ending up in the lake. The contamination is compounded by the fact that degradation of wetlands has lost some of their filtration and purification capacities.

### **3.2. Production and Income Generation**

This section gives some background information on the status of natural resource based production and income generation as presented in the Baseline Information Report, chapter 3 (pp. 17-48).

#### **3.2.1. Agricultural production and livestock**

Agriculture is the most important economic activity in the Lake Victoria Basin counting for between one fourth (Kenya) and close to one half (Tanzania) of the GDP in the three countries. More than 85% of the population of East Africa live in rural areas where agriculture is the main source of income and employment. Subsistence farming is widespread. Even among the fish traders and fishermen, agriculture is the most important complementary activity. Just in terms of its economic and demographic magnitude, the agricultural sector has a prominent position as the major provider of food security, nutrition and human well-being. Farming systems have direct bearing on the quality of the environment through land amount and growth of land acreage under cultivation and the use of agro-chemicals, herbicides and pesticides.

All over the basin the area under cultivation is increasing at the expense of forest cover, wetlands and riverbanks, purposely to meet the increasing demand for food and cash. Cash crops are expanding at the expense of traditional food crops, creating disparities between different socio-economic groups. In many parts of the basin technical advice and innovations on soil fertility are either rudimentary or non-existent. In various lowland areas, off-season production cannot be undertaken due to inadequate irrigation facilities. Loss of traditional seed banking techniques affect farmers who cannot afford certified seeds. Women lack access to emerging technological innovations, yet they are most active in farming.

Livestock production is an important source of livelihood and a critical enterprise with extensive potential in the Lake basin area. However, development of the livestock sector is constrained inadequate grazing pastures and water shortages, inadequate skills to improve domestic livestock breeds, especially for dairy production, and inadequate veterinary services. Technological innovations such as zero grazing are limited and farmers are reluctant to adopt improved breeds for fear of losses.

#### **3.2.2. Forestry**

The contribution of the forest sector to the GDP on the three partner states is probably underestimated. In terms of its economic importance the forest sector is difficult to characterise as much of the output remains unrecorded and goes to meet subsistence consumption and the basic needs of rural populations. Forest produce is also often traded informally and illegally.



Natural forests in the lake basin are threatened by the expansion of settlements, forest fires, mining activities, over-grazing, illegal harvesting and demand for agricultural land. Activities, such as charcoal burning, firewood collection and brick making, consume massive quantities of wood. Carpentry and forest inputs for building and construction materials are visibly causing forest degradation in the Basin. The influx of refugees in the basin has also aggravated the situation particularly in areas around the camps.

Natural vegetation cover is under rapid degradation in the lake basin. In many parts there it is evidence of ongoing deforestation causing reduced vegetation cover and the land vulnerable to water and wind erosion. Initiatives for afforestation and reforestation have been implemented in various parts of the basin, but – on a whole – yet not yielded the desired results. Even though individual seedling nurseries prove competitive compared to central, commercial nurseries, there seem to be too few incentives for individual farmers to engage in nursery establishment because of the long-term perspective inherent in these activities.

### *3.2.3. Fisheries*

Fish catching and processing for export, as well as for the supply of local markets, are, next to agriculture, one of the most significant economic activities in the lake basin. The fisheries sector employs over 500,000 people directly or indirectly and the total landings from the three riparian countries are more than 500,000 tonnes per year. The EAC Private Sector Strategy Report states that this accounts for 95 % of all landed fish catches in the three countries as well as nearly all foreign exchange earnings from the fisheries sector. The commercial fisheries industry is totally dependant on the European export market for processed fish products.

The result of this high level of activity has been severe over-fishing of Nile Perch and other species. Catches as well as the average size of fish have dropped drastically over the last years despite attempts by the governments to enforce various control measures. Over-harvesting has also put great strain on artisanal fishing resulting in growing unemployment. Local fisher-folk, squeezed by declining catches and falling fish prices, have resorted to the use of small mesh nets and, in some cases, to the use of poison with detrimental consequences for fish stocks and breeding areas.

The change in fisheries appears to have affected special groups' access to resources. During the pre-perch period, most of the small boats and the associated simple fishing gear were owner-operated. Today the technology is more complex and expensive. Absentee entrepreneurs with vertically integrated management systems and large capital investments dominate the fisheries. Traditional fishmongers, the majority of whom are women, are being forced out of business. The emphasis on processing fish for export, particularly Nile perch, has reduced the supply and choice available to local consumers.

### *3.2.4. Wildlife and tourism*

Certain regions of the lake basin have an extremely rich wildlife, in numbers as well as in species and diversity. In addition to the intrinsic value of rich wildlife resources in itself, wildlife is a huge resource – even a prerequisite – for the development of tourism in the lake basin to boost the national economies and to provide local income opportunities. Tourism contributes to significant shares of GDP in the partner states,



most significantly in Kenya and Tanzania, and the wildlife reserves throughout the Lake basin play an important role in this development.

This resource is, however, threatened by different ongoing processes that encroach conservation areas and affect the habitats of wildlife. Sustaining and protecting wildlife areas often conflict with other human activities, such as agriculture, livestock grazing and the expansion of human settlements. Regardless of the importance for the national economies and the great economic potential for further development, wildlife and conservation areas are at present threatened by processes of encroachment, habitat loss, deforestation and uncontrolled hunting and poaching.

### 3.2.5. Mining

Mining provides sustaining economic activity in areas where commercially valuable minerals are accessible. Mining is a growing economic sector and geological mapping reveals a wide range of mineral deposits in various parts of the lake basin, including limestone, volcanic ash, limonite, iron, gold and diamonds. As a result of the general liberalisation of the economy, the mining sector has experienced an exploration boom. To-date some world class mines have been opened and are already producing while others are in the construction phase.

Long promising, the potential for large-scale mining has been rapidly developed in recent years. Several world-class international mining companies are established in the lake basin. In addition to a fast growing production they are also engaged in exploration of new potential mineral deposits. In the parts of the lake basin rich in mineral deposits, it is expected that the mineral sector will contribute significantly towards industrial development, employment and income creation, as well as social and economic infrastructure development, foreign exchange earnings and government revenues. Although the scale of operation is dramatically different from that of the mining companies, a substantial number of people – some of which are women – are engaged in small scale mining as a fulltime or complimentary economic activity.

### 3.2.6. Physical infrastructure and urban based economy

Chapter 4 of the Baseline Information Report provides more background data and information on the present status and trends of this thematic area (pp. 49-56). Important inputs can also be found in the EAC studies on the Economic Potential and Constraints for Developing Lake Victoria Basin as an Economic Zone and the draft Private Sector Development Strategy.

There are several important urban centres in the lake basin area, rendering a wide range of services – transport, banking, telecommunications, and other support activities – critical to social and economic development of the basin. Economic opportunities in the urban areas attract people, and the annual population growth rate in some of the cities is extremely high (above 8 %). The urban areas not only provide employment opportunities in the formal sectors of the economy, but also give numerous options for informal businesses and self-employment. However, the great influx of, primarily young, people also create great demand on the provision of public service, transportation, housing and physical infrastructure.

Physical infrastructure is in great need of upgrading and expansion throughout the lake basin. The *transport sector* is dominated by road transport, accounting for an estimated 80% of all land transport. However, virtually all roads in the rural areas of the basin are unpaved earth roads, the majority of which are in a poor state of repair making it difficult to access productive areas during the rainy season. Road maintenance carries a huge and increasing backlog, with largely irregular and limited spot improvements carried out on a had-hoc basis. Also vehicle overloading causes considerable damage to the road system. Food production and marketing are badly hit.

Railways would provide an important mode of transport for the carriage of bulky goods over long distances, in particular between the East African ports of Mombasa and Dar es Salaam and the lake basin regions in all three countries. However, the railway infrastructure is far from satisfactory to serve this purpose due to poor management and lack of investment in rehabilitation and upgrading of tracks, rolling stock and security. All three countries are pursuing policies of privatising the rail transport sector.

Water transport services on Lake Victoria include railway ferries, general cargo and passenger services. Along the lake shoreline, water transport is the main mode of transport with a number of private boats serving the many smaller ports. Available capacity however, has been over stretched and naval security inadequate. The partner states have signed an Inland Water Transport Agreement, when fully operational, will regulate and harmonise inland water transport on Lake Victoria.

International airports at Entebbe, Eldoret and Mwanza serve the lake basin. There are also airstrips accessible to light aircraft near other major towns in the lake basin. In particular the smaller, regional airports need upgrading and basic facilities to operate on a larger scale.

Telecommunication and information networks have increased greatly during the latest years as have also postal services. However, these services are primarily concentrated to the major towns, leaving rural areas outside district headquarters or major market centres with limited access to telephone facilities. Privatisation is an essential component in strategies to expand and upgrade telecommunications.

Water supply in the lake basin is provided from surface or underground water sources. Most of the surface water is to some degree polluted. Only in the major urban areas are water supply schemes developed to provide safe and clean water for consumption. Protected point sources, including boreholes and protected springs, are generally fit for domestic use, but easily contaminated. Some boreholes also dry up during long dry seasons. Urban sewers and sewage treatment systems are generally in a bad condition and raw sewage is often disposed directly to open water. Rural areas, and also in some urban and peri-urban centres rely exclusively on pit latrines for human waste disposal. However, coverage is low, and in some places of the basin no more than 40 %.

The EAC studies referred to above note that, in general, present legislation is a major obstacle for private sector involvement in industrial development. Initial steps have been taken by EAC to speed up legal harmonisation under a scheme termed “the

approximation of laws". Trade is suffering from barriers to the flow of commodities across borders due to time consuming customs bureaucracy and tariff barriers. However, the expected signing of the Protocol on EAC Customs Union by November 2003 will drastically rectify the present problems along with the EAC Private Sector Strategy.

### **3.3. Living Conditions and Quality of Life**

Chapter 5 of the Baseline Information Report (pp. 57-75) gives more detailed background information on social and demographic conditions on which the following summary presentation is based.

#### *3.3.1. Poverty as the overriding problem*

Poverty is an overriding problem in the Lake Victoria Basin. The Lake Victoria Basin resource potential is immense. However, this potential has not been utilised so as to reduce poverty and enhance quality of life in the region. Analysing and understanding poverty and income distribution is important because such a huge proportion of the lake basin population falls in this group. It is estimated that more than half of the population in the EAC countries live from an income below the official poverty line of 1 USD per day. The proportion of poor people in the rural parts of the lake basin may be significantly higher. Poverty is seen as a severe barrier for individuals', households' and communities' capacity to cope with rapid socio-economic changes and natural shocks. Poverty increases vulnerability and weakens capacity to realise visions and strategies set.

Poverty is largely attributed to widening income inequality due to inadequate economic growth. Important factors influencing rural poverty are restricted access to land and markets opportunities for agricultural produce. As for non-income poverty, factors like primary school enrolment, literacy, social vulnerability, nutrition, and access to safe drinking water, have faced a general decline, although these sectors show considerable variations between the partner states. Insecurity across national and regional borders also adds to the situation.

The Structural Adjustment Programmes (SAP) in the three countries, have adversely affected the living conditions of the lake basin population. To address some of the negative effects of the SAPs on social welfare and living conditions the partner states have designed national strategies and programs that explicitly address poverty. However, these national programs do not have the overall, regional co-ordinating role needed to effectively address the questions of poverty and sustainable socio-economic development across the lake basin as a whole.

#### *3.3.2. Health*

Diseases such as malaria, tuberculosis and dysentery and the HIV/AIDS pandemic in the Lake Victoria region have greatly impacted the general socio-economic situation and development in the Lake basin. The three diseases contribute dramatically to the present rising death toll amongst the population. Worsened health conditions, in particular in relation to diseases with a high death toll, do not only bring about direct suffering of individuals. Loss of productive manpower, human skill and social competence are strong drivers of vicious circles that undermine socio-economic development and foster poverty.

Malaria is by far the most frequent cause of mortality in the lake basin. The long and hot wet season makes the Basin area an ideal breeding ground for malaria-carrying mosquitoes. The problem is exacerbated by the impact of urban growth into new areas without adequate public health measures.

The HIV/AIDS pandemic strongly influences public institutions, especially in the health sector, and places heavy strain on public finances. Patients suffering from HIV/AIDS take up an increasing number of hospital beds and care capacity. The growing demands of the health sector to fight the death toll have greatly impacted the financial allocations to other public sectors crucial to poverty alleviation like education, water supply and agricultural extension services. HIV/AIDS has particularly hit hard in the productive age groups (15-49 years), leaving behind destitute orphans and elderly people. National prevalence rates vary considerably between the three countries (from 7 % in Uganda to 15 % in Kenya), largely attributed to the effect of national awareness campaigns and prevention programs. However, these average figures cover huge local variations. Available data indicates that some areas of the Lake Victoria Basin are some of the most severely affected by HIV/AIDS in the whole of East Africa.

In the recent years, the prevalence of tuberculosis has been on the increase in the lake basin. HIV accelerates the tuberculosis infection and affects the immune system in people that otherwise would not have developed active tuberculosis. HIV/AIDS infected people are also more vulnerable to malaria. The prevention and cure of malaria and tuberculosis is, therefore, crucial also to keep the immediate death tolls of HIV/AIDS down.

Nutritional status is indicative of both health and wealth. The availability of food and the balance between production for the market and for subsistence as well as culturally biased eating habits and low incomes are factors that influence the nutritional status. Also the high prevalence of HIV/AIDS has huge negative impacts on family income and nutrition. Malnutrition is a major underlying cause of the high child mortality in the lake basin. Malnourishment leads to higher susceptibility to diseases, with children in the most affected group.

In most parts of the lake basin access to health facilities such as hospitals and dispensaries is limited, unevenly distributed and in number barely keeping pace with the population increase. The situation is particularly critical in the rural areas and in isolated fishing villages. Effective infrastructure is a crucial precondition for people's access to health facilities and other social infrastructure and for these institutions to work properly. Physical infrastructure – in particular road networks and clean water supply – faces critical limitations in many parts of the lake basin. As an important preventive health measure, there is a critical shortage of clean and safe drinking water in most rural areas. The deterioration of water supply systems in strong need of maintenance as well as the increasing pollution of rivers and streams has left many communities with unreliable and unsafe water.

### *3.3.3. Education and training*

The situation for primary education in the Lake basin varies as national education policies have been rather divergent in the three partner states. Policies of cost sharing have over the years lead to greatly reduced enrolment, high levels of school dropout

and low completion rates, particularly among girls, as well as poor transition rates from primary to secondary education. The high cost of education impacts most severely poor families, orphans and other vulnerable groups. School dropout is in many instances closely related to the use of child labour and subsistence economy.

Education facilities at both primary and secondary levels are generally poor and inadequate and have not been expanded to match the growing population. Teacher staffing has not been able to recognise recommended teacher/pupil ratios resulting in compromised quality of education. Also the relevance of curricula at various levels has been questioned, relying predominantly on theoretical rather than practical/vocational subjects.

Currently falling school enrolment rates, partly attributable to deaths and sickness among children, will be even more negatively affected by the financial strain on government budgets. The HIV/AIDS pandemic has also led to a serious shortfall of professionals, e.g. the number of trained schoolteachers.

#### *3.3.4. Research activities in the lake basin*

Apart from having intrinsic values and benefits in itself, higher education and research is instrumental in generating economic growth. Institutions of higher education and research are potential vehicles for providing general knowledge, scientific information and data needed to formulate and operationalise sustainable development strategies for utilisation of lake basin resources and to monitor changes over time.

A considerable amount of research programmes and projects have been undertaken on Lake Victoria and its catchment area over the years, the bulk of which have been donor supported. However, the programs tend to be considerably overlapping and only weakly co-ordinated. Research activities have been undertaken at national level to address problems with obvious common, regional dimensions. Much research tends to be of a basic character, and, though numerous as they may be, have hardly had any effect on the development agenda of the lake basin. Most of the results and findings have hardly been shared outside academia, and with few tangible results directly assisting in easing the problems of the people in the lake region.

However, steps have been taken to establish possible funding and modalities of improved co-ordinating of research initiatives in the Lake Victoria region. The Inter-University Council for East Africa (IUCEA) has been mandated to spearhead regional research activities. Under the auspices of EAC and supported under the Lake Victoria Partnership the Lake Victoria Research Initiative has been established to in order to better co-ordinate national and regional research issues and priorities. Other institutions that can compliment these efforts include the Lake Victoria Fisheries Research Project (LVFP) and the Lake Victoria Environmental Management Project (LVEMP).

### **3.4. Population and Demography**

The population in the partner state area of the Lake basin is estimated at 24 million people, approximately 30 % of the total population in the EAC countries according to year 2000 figures. Some of the lake regions are among the most populous regions in their respective countries, and the annual population growth is close to 3% per year.



In some rural areas the growth is even higher and in some urban areas it exceeds 8%, one of the highest urban growth rates noted worldwide. The high fertility in the lake basin (in some areas as high as 7) is associated with high mortality rate, absolute poverty, low levels of education and use of contraceptives as well as high values attached to having children in general, and for securing labour intensive sources of income. High fertility and slow job creation restrain the ability to eradicate poverty without considerable dependency on foreign donor support.

In the basin as a whole, the economically active population (age group 15 – 64 years), constitutes between 40 and 50% of the total population, much of which is underemployed. Women make up more than half of the labour force. The majority of people (on average 85%) are engaged in subsistence agriculture with a smaller, but significant, proportion of the population engaged in artisanal fishing or in the commercial fishing industry.

In recent years HIV/AIDS has had a devastating impact on the residents of the Lake basin. It has hit hardest in the productive age bracket (14-40 years), especially among fisher-folk. There has been a major increase in the number of orphaned households, with an accompanying increase in the school dropout rate and food insecurity.

### **3.5. Governance, Institutions and Policies**

Institutional frameworks affecting the Lake basin ecosystems, social and economic development, span multiple scales and dimensions. Issues of governance cover cross-cutting policy areas like harmonisation of policies, laws and regulations, decentralisation and devolution of power, public participation and the role local authorities and civil society, and the establishment of mechanisms for conflict resolution. Chapters 6 (pp. 76-89) of the Baseline Information Report gives more detailed information on the issues discussed below. Also Chapter 7 on the role of donors provides relevant background information.

#### *3.5.1. Harmonisation of laws, regulations and policies*

Many barriers to a more sustainable development of the lake basin result from the fact that national policies and legal framework in the partner states are at variance and in need of harmonisation. Although being gradually built up under the framework of the EAC Treaty, lack of regional co-operation is still hampering socio-economic development and effective resource management in the lake basin. Under the various policy areas many examples are given of policy issues in need of transboundary harmonisation and co-ordination.

Steps are taken by EAC to address the question of legal harmonisation based on an overall set of guiding principles for mutual harmonisation of laws and regulations in the partner states:

- The EAC Treaty, global conventions, international treaties and regional agreements signed by the EAC partner states – although often limited in scope and range, as well as proven slow in implementation – should form the background for harmonisation of laws and regulations;
- The harmonisation of policies, laws and regulations should be based on the principles of sustainable use and management of natural resources,



prevention of environmental harmful impacts, good governance, gender equality and equitable distribution of opportunities and benefits;

- Environmental laws and regulations are a priority area to be harmonised, including policies and laws on resource management, environmental protection, agriculture, fisheries and procedures for resolution of disputes.

The EAC study on *Institutional Framework for Sustainable Development of the Lake basin* more specifically lists 10 different policy areas in need of legal and institutional harmonisation. Five of these relate to environmental management and the protection, utilisation and management of natural resources (water, fisheries, agriculture/forestry/land use and wildlife). Existing regional institutions like Lake Victoria Fisheries Organisation (LVFO) and Lake Victoria Environment Management Project (LVEMP) either have a too narrow range or a limited mandate for taking transboundary policy initiatives and implementing action. Policy decisions are recently taken to place these institutions under the control of EAC (see below).

Other areas cover laws regulating economic development and infrastructure (primarily industry, trade, transport and energy sectors). Other important areas for policy development and legal harmonisation are public health, mutual security and safety, and institutional development and capacity building, including research activities. More than 60 different themes are listed as examples of issues in need of updated, harmonised legal instruments and/or common standards.

The *Draft Protocol on Sustainable Development of the lake basin* now under discussion by the relevant EAC policy institutions lays out a wide framework for institutional co-operation between the partner states as well as defining a set of common, overall principles for resource management and socio-economic development. The scope of co-operation falls into four broad categories:

1. *Natural resources management*, covering the following sectors: water resources, fisheries, agriculture and land use, forestry, wetlands, wildlife and tourism;
2. *Production sectors and infrastructure*, covering trade, commerce and industrial development, technical infrastructure and energy, as well as maritime and navigational security;
3. *Environmental protection and public health*, in particular sanitation;
4. *Governance and capacity building*, including gender policies, public participation and institutional capacity building.

The draft Protocol proposes the establishment of a Lake Victoria Basin Commission to be responsible for the provision of overall policy directions and guidance for the promotion and implementation of development projects and programmes in the lake basin (including LVFO and LVEMP). Resource management in the lake basin shall be guided by a set of overall principles that can be summarised in four groups of that cut across all areas of policy development:

- The principle of sustainable development, including the precautionary principle;
- Principles for sound water resource management; i.e. emphasising water resources as unitary systems, water as a social and economic good, equitable

- and reasonable utilisation of water, and the protection and conservation of water resources as shared international ecosystems<sup>5</sup>;
- Principles and policy guidelines for environmental protection based on the principles of preventing harm and giving prior notification of planned measures, the Polluter Pays Principle (PPP), and the introduction of systems of Environmental Impact Assessment and Audit;
  - Principles of Good Governance including the principle of subsidiarity, public participation and gender equality.

### 3.5.2. Decentralisation, public participation and the role of Civil Society Organisations

During the 1990s Uganda and Tanzania have embarked upon major structural and organisational reform programs aiming at decentralisation and devolution of power to local government authorities. In Kenya such reforms have so far been less emphasised. The overall objective of the reforms is to create responsive and transparent local authorities with adequate financial and human resource capacity to meet the needs of their communities in ways that allow for broad public participation and partnership. The core areas of the reforms are improved service delivery at community local level, financial accountability and good governance, i.e. transparency, responsiveness, effectiveness and control of corruption.

Although these reforms have been ongoing for some time implementation is slow – in particular regarding transfer of real power to local governments. Local authorities are still more or less completely dependent on central government for funding, and are able to cover only a minor part of recurrent expenditure from own sources. Government grants tend by and large still to be earmarked for specific sectors like education, health and water. Funds for development are nearly exclusively allocated from central government or – as is often the case – provided by donors, non-government and community based organisations (NGOs and CBOs) that operate throughout the lake basin.

Although no complete inventory exists, it is observed that the number of Civil Society Organisations operating in the Lake basin has seen a remarkable expansion during the 1990s. However, only few of them operate on a regional basis. The two main region-wide NGOs are ECOVIC<sup>6</sup> that covers the entire lake basin and addresses poverty issues and environmental degradation of the lake and LANESO<sup>7</sup> that addresses sanitation and poverty issues. Both organisations focus on working at the grassroots level, and have for a number of years been closely collaborating with various donors throughout the basin.

### 3.5.3. Conflict awareness and mechanisms for conflict resolution

The case of implementing shared visions and strategies for sustainable development of the lake basin will to a large extent centre around the ability and capacity of the partner states to manage conflicts among a wide range of stakeholder interests. Latent as well as manifest conflicts are apparent in several policy areas, as the following examples illustrate:

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<sup>5</sup> These principles are often referred to as the *Rio-Dublin Principles for Water Management*. There is no direct reference to the principles but the draft Protocol is clearly reflecting their content and focus.

<sup>6</sup> ECOVIC= The East African Communities' Organisation for the Management of Lake Victoria.

<sup>7</sup> LANESO= Lake Nyasa Environmental Sanitation Organisation.

- *Territorial conflicts* are manifest as unresolved disputes over international borders in parts of the lake basin and claims to sovereignty and ownership over certain parts of the lake. The background is primarily one of conflict over access to resources, in particular fish. It is claimed that the distribution of fishermen, gear and catches does not tally with each country's share of the lake. Conflicts are still occurring well over two years after the harmonisation of fishing laws and the existence of mechanisms within EAC for dispute resolution.
- *Conflicts between different users of natural resources* pertain to the question of access to and utilisation of resources. Typical examples are conflicts following the negative effects on artisan fishing by the gradual take-over of the commercial fishing industry and conflict over land use and access to land, e.g., conflicts between farmers and livestock keepers in situations of agriculture expanding into areas traditionally used for grazing. Also protection of nature conservation areas and wildlife has repercussions on primary users as evident in the (often perceived) conflict between conservation and utilisation. However, situations of scarcity are often local and not necessarily considered a national problem.
- *Mechanisms and institutions for allocation of resources* may be a source of conflict as observed in the issue of local natural resource management where local communities want management and control of natural resources to be entrusted in institutions at local level.

### **3.6. Gender aspects**

Gender issues are critical to economic and social development in the lake basin and are cutting across all policy areas. A logical consequence is, therefore, to bring together and develop this perspective as a separate policy area closely linked to issues of policy development, legal harmonisation and conflict resolution.

Women in the lake basin play a major role in natural resource utilisation and management even though their access to and control over natural resources is limited. Women have a principal role in providing household earnings, food security and nutrition as well as in child upbringing and care. It is estimated that women contribute 90% to food production. However, as a major part of women's productive activity is localised in the informal economy, the full contribution of women to socio-economic development is not represented in official statistics.

A great majority of rural households is headed by females, often as full time smallholder farmers, the majority of which are poor and vulnerable to even small changes in economic conditions. With increasing commercialisation in the agriculture sector women tend to lose control over resources, proceeds and household food. Ownership rights for women are central to increase food production and ensure high level of food security in the lake basin. However, the access to and use of land and natural resources is generally gender-biased. In addition to having little control of land, women have also limited access to credit and extension services, the same tendency also applies to access to education.

The fisheries sector has clear gender characteristics, with men fishing and women engaged in fish trading and small-scale, non-commercial fish processing. Although more women now engage in the fisheries on a commercial basis, exploitation of women at landing beaches is still widespread in which fishermen demand sex from fishmongers before selling. With declining resources, this practice has become rampant and accounts, at least in part, for the increasing prevalence of HIV/AIDS around the lake.

### **3.7. Existing visions for Lake Victoria and the lake basin**

The Vision and Strategy Framework has been formulated in tune with existing vision statements and strategies for the lake and the lake basin. In its development strategy for the period 2001-2005 EAC has framed the following vision statement for the Lake basin:

*"To attain an improved quality of life in the Lake Victoria Basin through sustainable development, management and utilization of natural and human resources."*<sup>8</sup>

The overall values expressed in this vision are explicitly reflecting the principles of *sustainable development* which implicitly also address questions of poverty alleviation, social justice and equity. The EAC Treaty sets another set of basic values. The Treaty states that economic development and co-operation between the partner states should be *people centred* and *private sector driven*, and should also build on existing economic diversity and equal sharing of costs, risks and benefits between the partner states.

The Shared Vision and Strategy Framework for the Lake basin has also been elaborated to encompass – or at least not be in disagreement with – other existing visions agreed by the partner states for the lake or for specific regional programs. The most extensive example of such programmes, of which the EAC partner states are members, is the Nile Basin Initiative (NBI). NBI covers 10 different countries of which NELSAP (*Nile Equatorial Lake s Subsidiary Action Programme*) is an integral part for the 8 countries of the Equatorial Nile Lake System. The overall shared vision for NBI states that the aim is:

*"To achieve sustainable socio-economic development through equitable utilization of, and benefit from, the common Nile Basin water resources."*

The objective of NELSAP supports the NBI vision by stating that the activities should:

*"[To] contribute to the eradication of poverty, [to] promote economic growth, and [to] reverse environmental degradation."*

Lake Victoria Fisheries Organisation (LVFO) and Lake Victoria Environment Management Project (LVEMP) have both stated visions closely matching those of EAC and NBI, albeit their visions are more focused on activities on the lake itself:

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<sup>8</sup> Quoted from the EAC report on "Institutional and legal arrangements for sustainable development of Lake Victoria and its Basin."

*“[To] foster a common systems/resource management approach amongst the Contracting Parties in matters regarding Lake Victoria, with the goal of restoring and maintaining the health of its ecosystem, and assuring sustainable development to the benefit of the present and future generations.”*  
(LVFO)

*“A stable Lake Victoria ecosystem capable of meeting demand for food, income, safe water, employment, diseases free environment and conserved biodiversity”* (LVEMP).

## 4. THREATS AND CHALLENGES

### 4.1. Knowledge base and processes

This chapter gives a summary of short-term and long-term threats and challenges emerging from the presentation of the present status and prevalent trends representative of the situation in the Lake basin within each of the five policy areas.

The presentation of threats and challenges in this chapter seeks to draw up the 'narrative background' on which the Regional Task Force have based its conclusions and recommendations on priority areas, visions and strategies. As for Chapter 3 the information is based on available scientific information, policy documents, views and opinions of local communities and stakeholders represented in the national consultation processes as well as information fed into the process by participants during the process.

On its way upwards from community level to national and regional levels, the overall narrative picture of perceived threats and challenges have been widened, in some cases also more focused, as new perspectives have been brought in from new groups of stakeholders at these levels. Harmonisation processes have taken place at national as well as regional levels, and the output of these processes constitutes the factual background on which the national and regional policy area visions, strategies and indicators are built. For each policy area, this chapter gives a brief summary of the main conclusions of the baseline study and the issues – threats and challenges – addressed by the NTFs and the RTF.

### 4.2. Policy area 1: Ecosystems, Natural resources and Environment

Lake Victoria Basin is made up of a great variety of ecosystems that provide a wide range of goods and services for the population in the area. The Lake basin has displayed considerable changes in its ecosystems during the last three-decade period – spanning from an original intact dynamic system to one now foundering in unanticipated ways with the possibility of big state changes occurring. The ecosystems of the lake basin are under pressure for a variety of reasons. The effects are numerous and give rise to a wide series of concerns. At the same time the vastness and variety of natural resources create a great potential for social and economic development and for addressing the poverty prevailing throughout the basin. Some conclusions on the major threats to the ecosystems, natural resources and environment of the Lake basin are summarised below. Chapters 2 and 3 of the Baseline Information Report (Annex 1) discuss the threats to the lake basin ecosystems in more detail and with references to the underlying scientific studies.

#### *Increased pressure on water resources*

The water resources in the lake basin show signs of degradation and depletion, mainly because of over-abstraction, diversion, destruction of filtering mechanisms, and release of agro-chemicals, waste and refuse to water bodies. At the same time the demand for water is increasing with population growth and economic development intensifying the pressure on the resource. Effective and co-ordinated systems of integrated management of the water resources will be a crucial



precondition for a healthy environmental situation and sustainable socio-economic development in the Lake basin.

The management and control of the water resources and their use is split between different central and local government agencies, with limited financial means to meet the challenge of providing clean water to the rural and urban population.

The deteriorating ecological health of the lake basin has crucial effects on the living conditions and quality of life for large groups of the population as well as for the resource base for future economic development. In the lake itself, introduction of alien species have greatly affected ecosystem structure and species composition. These have changed both social and economic conditions for fishing as a commercial activity as well as for subsistence. In particular, this has affected the poorer lake shore communities that traditionally have relied heavily on native species for subsistence. Given the shift in fish ecosystem composition, many indigenous species, which provide cheap and easily available protein, have disappeared (although some are currently resurfacing) and left the population with less fish. The decline in supply is also regarded to be a major cause of malnutrition prevalent in lake shore communities as evidenced through different surveys. Fishing communities and subsistence farmers are also affected by the degradation of forests and wetlands. Furthermore, the increased risk of flash floods in rivers and tributaries primarily hit flood prone, marginal areas often inhabited by the poorest section of the population.

The use of water has considerable socio-economic and equity implications. In general water resources in the Lake basin are unevenly distributed and in many places inadequate and dependable supply of water is a major constraint to economic development e.g. as a critical input to sustained growth in agricultural production, livestock production and improved food security. There are direct links between poverty, social well-being and access to and management of water resources. Poor people tend live in areas without proper water supply and sanitation. Lack or shortage of water has also obvious gender and poverty implications, since women and the poor are the most severely affected by long distances to find water. Deterioration in water quality caused by both point and non-point sources of pollution have also direct implications for the health situation, the most prominent being spread of malaria and waterborne diseases like bilharzias, typhoid, dysentery and cholera as a result of stagnant and/or polluted water.

#### *Land pressure, habitat loss and degradation of wetlands*

Although with some variation, land pressure is manifested throughout the lake basin leading to pressure on natural forests, considerable deforestation and clearing of bush and woodland to expand farming. Often this takes place in marginal, less productive areas like hill slopes vulnerable to soil erosion as well as in wetlands along rivers and the lake shore. High population growth coupled with poor farming technologies, have created heavy pressure on clearing new land for agricultural production. Also wetlands along rivers and the lake shore, very rich in biodiversity, are increasingly under pressure for cultivation and livestock purposes.

In particular, the degradation of land resources seriously affects the poorer segment of the population in the rural areas. Uncontrolled logging and expansion of

agricultural land into forest areas has increased soil erosion and nutrient depletion and caused further decline in agro-biodiversity and increased exposure to plant diseases and pests, in the end resulting in reduced income for the farming communities. Unsustainable land use development and population pressure have direct effects on wildlife that in turn may affect local subsistence economies and food security especially for poorer people. The ongoing decline and disappearance of species also affect their use in traditional medicine and the cultural values connected with them.



**Photo 3: Wetland Area near Mwanza, Tanzania (by Mark Bain).**

#### *Forest degradation in the lake basin*

Forests offer genetic resources and unique natural ecosystems and habitat for wildlife. These resources are under pressure because forests also provide a source of income, food security, energy and shelter. Bio-energy is the main sources of fuel for rural population and accounts for the major part of the total energy consumption in the lake basin.

Natural vegetation cover is rapidly degrading in the basin area. Ongoing deforestation due to land clearing, extensive logging, and charcoal burning reduces vegetation cover and exposes the land to water and wind erosion. Reduced tree cover will increase water run-off and soil erosion, and destabilise the groundwater level, all factors likely to reduce biodiversity and agricultural output. As a result of high wood demand for fish preservation and processing, serious deforestation is also taking place along the lake shore

Over-harvesting of indigenous tree species and loss of large forest communities to forest plantations, agriculture and settlements has led to a dominance of exotic tree species. These changes have degraded the associated wildlife. Some efforts for afforestation have introduced alien species with disastrous effect to the environment, biodiversity composition and ecosystem health. Trees and plants species have been introduced for fruit production and ornamentation and several have become invasive,

taken over the habitat of other indigenous shrubs and even become weeds and habitat for tsetse flies.

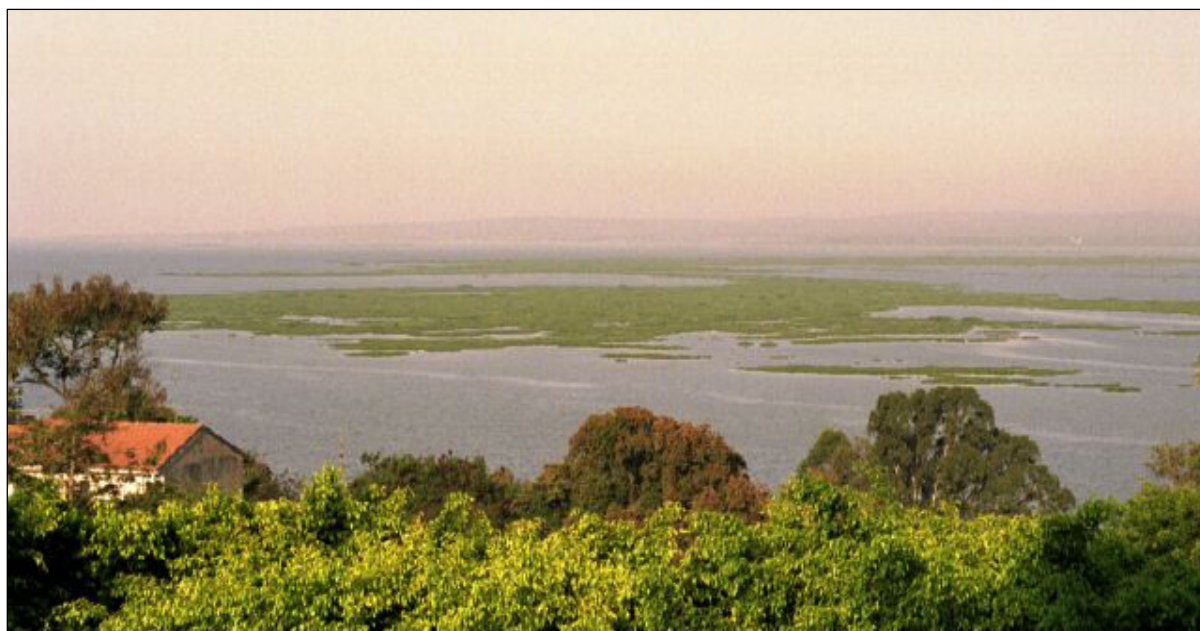
The driving forces responsible for the decline in the forest resource base are clearing of forests for agriculture and cattle grazing, commercial charcoal production and over-harvesting partly due to weak regulation and illegal timber trade. Severe deforestation is also reported in areas where small-scale mining is practised caused by the demand for energy in processing and the use of timber to reinforce pits and ditches.

#### *Decrease in fish biodiversity and altered food webs*

In the past, the lake did have a very high diversity of aquatic and fishery resources. Great state changes have occurred in water quality, nutrient cycling and food web structure of the lake leading to changes in fish biodiversity. Introduction of alien species such as the Nile perch and the water hyacinth is thought of being responsible for at least part of this change. The changes are also strongly affecting the harvesting of aquatic resources from the lake. Given the shift in fish ecosystem composition, many indigenous species, which provide cheap and easily available protein, have disappeared affecting food security in the lake communities.

#### *Water weed invasion*

Introduction of Nile perch and the water hyacinth is believed to be a major reason for the alteration of many communities of aquatic and terrestrial species associated with the lake. Alteration of the aquatic communities as well as effects on human pathogens and insect pests has largely been attributed to the water hyacinth invasion during the 1980s and 1990s. Even though biological control, assisted by mechanical removal and manual harvesting, has reduced water hyacinth noticeably, the plant is still negatively affecting local fishing, causing abundance of insect pests and hindering water transportation. However, water hyacinth is also utilised in the cottage industry and in the feeding of livestock.



**Photo 4: Water weeds in Kisumu Bay, Kenya (by Grete Klavenes).**

### *Pollution from point and non-point sources*

Although good trend data are lacking, it is widely believed that Lake Victoria is experiencing a gradual eutrophication. Inputs of nitrogen and phosphorus to the lake are largely from atmospheric deposition. Nutrient inputs from the land, tributary watersheds, and industrial and municipal sources are not highly influential on the total lake water quality, but give rise to serious eutrophication in some specific areas (rivers, shoreline areas, gulfs and bays). These areas are subjected to oxygen stress and contaminants due to nutrient inputs and wastes from human and industrial activities.

Water pollution in the Lake basin has been linked to industrial discharges. Wastewater treatment plants are either not installed or generally malfunctioning. Laws and regulations intended to control pollution are regularly outdated, their enforcement is weak and the penalties too small to act as an incentive for installing effective treatments systems. There are also few incentives to use environment friendly technologies.

### *Degradation of wildlife*

Sustaining and protecting wildlife areas often creates conflicts with economic interests and need for human space. However, wildlife is a huge resource for the tourism industry beside the intrinsic value of a rich wildlife itself. The wildlife population in some part of the basin is among the largest in the world and a global attraction. It is however still threatened by unsustainable utilisation. Nature reserves and national parks suffer encroachment from agricultural development, livestock grazing and human settlements, partly resulting from high population growth and increasing levels of poverty. Subsistence hunting is prevalent in some places, leading to poaching and devastating bush fires. Unless these issues are addressed properly in policies, the wildlife availability in the basin faces danger of depletion, especially vulnerable endemic species.

### **Box 1: Some typical environmental issues and challenges addressed by stakeholders at national level**

“Poor environmental attitudes in the population – ‘*enyanja tenoga*’ “ (Uganda)  
“Unplanned and unregulated urban and industrial growth leading to immense pollution” (Uganda)  
“Bad fish habits such as fish poisoning and beach seining combined with weak law enforcement” (Uganda)  
“Pollution and soil erosion from agriculture and agro based industry” (Kenya)  
“Steady decline in numbers and species of wildlife” (Kenya)  
“Rampant environmental degradation and soil erosion due to deforestation and destruction of land cover” (Kenya)  
“Pollution in the lake basin has been aggravated by domestic, industrial, mining and agricultural activities” (Tanzania)  
“Inadequate and fragmented environmental legislation and regulations coupled with weak enforcement” (Tanzania)  
“Rapid population growth coupled with inadequate supporting services has led to low agricultural productivity” (Tanzania)



At regional level the major threats and challenges faced in the policy area Ecology, Natural Resources and Environment are summarised (Box 2 below) in a way very closely reflecting the conclusions of the National Reports and the documentation contained in the Baseline Information Report. (Annex I). The summarised and harmonised set of threats and challenges form the basis for the choice of prioritised strategies and indicators is shown in Box 5.

## **Box 2: Summary of threats and challenges on ecology, natural resources and environment addressed at regional level**

### **Fish resources**

- Over fishing and unsustainable fishing methods that have threatened fish stock;
- Introduction of alien fish species leading to loss of indigenous fish species;
- Water hyacinth and aquatic weed infestation.

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### **Forests and wetlands**

- Poor land use practices leading to soil erosion and siltation of the lake and rivers around it;
- Overgrazing and deforestation;
- Habitat changes and wetland degradation;
- Inadequate utilization of alternative sources of energy;

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### **Water Resources and water management**

- Discharges and solid wastes from industrial and municipal establishments along the shores of Lake Victoria;
- Uncontrolled use of pesticides, fertilizers and herbicides leading to contaminated and eventual pollution of the water sources in the lake and its basin;
- Unregulated industrial establishment and poor urban planning is leading to a lot of shoreline degradation;
- Poor and inadequate sanitation, car washing, etc are causing increased pollution and nutrient loads into the lake;
- Perennial flooding;
- Atmospheric deposition into the lake as well as shipping and oily boat wastes loaded into the lake is contributing to pollution;
- Inadequate access to clean, safe water supply for both humans and livestock as well as for agricultural production;
- Destructive mining activities and mine waste pollution into the water bodies have caused a lot of degradation of the aquatic environment.

### **Wildlife**

- Wildlife habitat destruction and poaching have led to species loss especially in endangered species.

### **Policies, laws and regulations**

- Scattered legislation, insufficient enforcement and un-harmonised policies and laws governing natural resources management.

### **4.3. Policy area 2: Production and Income Generation**

Economic development in the Lake basin will be contingent on the ability of the three countries to develop common objectives and policies for the utilisation and management of the basin's vast natural resources – some of which are presently under severe pressure from ongoing economic activity and population growth. As more than 80 % of the lake basin population live in rural areas and rely on agriculture as their main source of income, the potential and possibilities to harness these resources remain the overriding challenge for a more sustainable and equitable economic growth.

Chapters 3 and 4 of the Baseline Information Report (Annex 1) gives more detailed background information on issues discussed below with references to the underlying studies and documentation.

#### *4.3.1. Agricultural production and livestock*

Just in terms of its economic and demographic magnitude the agricultural sector will have to play a prominent role in the future development of the lake basin. However, regardless of the high potential for agricultural development, poverty remains massive throughout the lake basin. The great majority of the population is engaged in food production, of which most are subsistence farmers growing seasonal crops on small areas with very simple technology and limited use of inputs. The sector is faced with the fundamental challenge to provide food for a rapidly growing population, as well as delivering raw material for agro-industries, and earning foreign exchange from exports. The great potential for agricultural production of a wide range of crops, including livestock production, is far from fully exploited. Major factors hindering development are poverty, land pressure, environmental degradation and encroachment of natural forests and reserves.

Access to land and ownership rights for women, who count more than 80% of the rural smallholders, are significant problems. The rapid population growth and poor technology has created massive pressure to clear new agricultural land. Basin wide the area under cultivation is increasing at the expense of forest cover, wetlands and riverbanks, purposely to meet the increasing demand for food and cash. In some areas cash crops are expanding at the expense of traditional food crops, creating increased socio-economic disparities between groups.

#### *4.3.2. Forestry*

Forests play an important role in employment creation and direct support for livelihood in addition to their crucial ecological and environmental function. A large proportion of the rural population depends on forest resources to for energy, food security, and shelter. In terms of its economic importance the forest sector is difficult to assess as much of the output remains unrecorded and goes to meet subsistence consumption. Forest produce is also often traded informally and/or illegally. However, overexploitation and unsustainable practices threaten vegetation cover and natural forests. Present efforts towards afforestation have not proved effective enough to address the decline of forest resources. The challenge for the forest sector is primarily one of improved forest conservation, and the strengthening of long-term forestry management (reproduction) policies at central and community level.



Although there are some success stories in introducing agro-forestry schemes, many afforestation initiatives have not yielded the desired results.

The general situation in the agriculture, livestock and forestry sectors as described above is confirmed by the conclusions of the EAC *Private Sector Strategy Report* summarising the constraints that restrain agricultural development as follows:

- Poor technical infrastructure (in particular rural road networks);
- Limited access to key input resources (lack of knowledge and skill, micro-credit facilities, access to land);
- Lack of support services (technology, agronomic practices and research, pest and disease control, veterinary services, marketing and storage facilities);
- Policy constraints, e.g. framework for privatisation, lack of harmonised agricultural policies, research and systems of (local) taxation;
- Constraints caused by outdated and/or lack of legal and regulatory framework, in particular on land tenure and market regulations;
- Gender constraints, lack of gender perspective in policies, ownership rights and access to credit.

In all the tree countries, stakeholder consultations support this overall picture as briefly illustrated in Box 3:

**Box 3: Some typical issues and challenges facing agriculture addressed by stakeholders at national level**

“Poor farming methods, inappropriate technology and inefficient implements result in low yields” (Kenya)  
“Loss of forest and vegetation cover influence microclimate, increase soil erosion and reduce biodiversity, e.g. herbal medicine plants” (Kenya)  
“Diminishing agricultural land, land fragmentation and poor quality of livestock (Kenya).  
“Poor infrastructure, inadequate markets and decline in the use of farm inputs (seeds, fertilizers and pesticides) have led to low agricultural productivity” (Tanzania)  
“Low agricultural productivity coupled with collapse of cooperative unions has affected farmers bargaining power, crop prices and rural income” (Tanzania).  
Reluctance of farmers to adopt improved breeds for fear of losses due to the limited feeds and veterinary services (Tanzania)  
“Predominantly subsistent farming“ (Uganda)  
“Declining land and forest productivity – declining biodiversity” (Uganda)

#### 4.3.3. Fisheries

The present depletion of fish resources is due to over-fishing, water pollution and the water hyacinth problem. Ongoing negative ecological and environmental processes in the basin influence the health condition of the lake. Soil erosion from deforestation and clearing of land for agriculture seriously affects fish breeding grounds. With the shift in the fish ecosystem composition of the lake, many indigenous species, which provided cheap and easily available protein, have disappeared. It has been urged

that the decline in local supply is an underlying cause of the prevalence of malnutrition in some lake shore communities.

In spite of the general population growth, the number of people in the local communities involved in artisan fishing has declined due to decreased catches and operations directed by the commercial processing industries. This has led to migration of fisher-folk to less crowded fish beaches and specialisation in less marketable species. This may lead to a return to agriculture and increased land pressure or intensified migration to urban areas.

The basically export oriented Nile Perch fisheries has brought about dramatic changes in the role and organisation of fisheries in the lake. During the pre Nile perch period, most of the boats were small, owner-operated and associated with simple fishing gear. Today the complex and expensive technology, large capital investments and absentee entrepreneurs dominate.

Traditional fishmongers, the majority of whom are women, are increasingly being forced out of business. The emphasis on processing fish for export has reduced the supply and choice available to local consumers and resulted in severe over-fishing of Nile Perch, great strains on artisanal fishing and growing unemployment. Local fisher-folk, squeezed by declining catches and falling fish prices, have resorted to the use of illegal fishing gears and methods with damaging consequences for fish stocks and the outside confidence in the fishing industry as a whole.

Again, the stakeholder consultations highlight the crucial role of the fisheries sector and its principal problems:



**Photo 5: Fisheries Village near Mwanza, Tanzania (by Tore Hagen).**

#### **Box 4: Some typical issues and challenges facing fisheries addressed by stakeholders at national level**

Depletion of fish resources due to over-fishing” (Kenya)  
“An upsurge of fishermen attributed to limited employment opportunities elsewhere” (Kenya)  
“Decreasing fish catches, increasing mechanization and commercialisation of the fishing and a large number of fish processing factories have led to a growing problem of unemployment among artisan fishermen in the lake basin” (Tanzania)  
“Limited scientific data on the development of potential fishery resources (Tanzania)  
“Unsustainable fish harvesting and bad fishing practices” (Uganda)  
“Declining fish catches, declining fish species, low fish prices and poor data collection on catches” (Uganda)

#### *4.3.5. Wildlife and tourism*

In addition to the intrinsic value of rich wildlife resources in itself, wildlife is a huge resource – even a prerequisite – for the development of tourism in the lake basin to boost the national economies. It is not yet fully recognised and accepted that wildlife can generate real economic and ecological benefits also to local communities, given the right economic incentives to sustain wildlife and conservation measures. Even if local people are concerned about resource degradation they are unlikely to protect the resources unless there are some sort of direct benefits and economic returns.

Despite its high economic potential, development of tourism in the lake basin is still hampered by poor infrastructure (airstrips, roads, accommodation and communication systems). In addition, guaranteeing personal safety and security of persons and property, is a major condition to the development of the sector. Cases of crime and general feelings of insecurity have considerable and immediate effects on the international tourist market. Lack of a well functioning tourism sector also has repercussions on economic diversification and spin-off effects to other sectors providing inputs for tourism.

#### *4.3.6. Mining and quarrying*

In addition to large, mainly international, mining companies a substantial number of individuals are engaged in small scale mining as a fulltime or complimentary economic activity. The scale of operation varies considerably and the technologies in use are generally basic, relatively inefficient and have wide-ranging effects on the environment. Small-scale mining of gold in various locations has reported severe environmental impacts. Severe deforestation is reported in areas where small-scale mining is practised. Mining of sand and clay has been reported to be a threat to the environment particularly due to lack of legal and regulatory framework to enforce sustainable exploitation of these resources. In some cases huge mining pits are left unfilled leading to expansion of sites for mosquitoes breeding.

There is a general need to overhaul legislation and the regulatory framework for mining. In some places social conflicts have erupted between the mining companies and local communities. Some small-scale miners have lost their mining plots to

mining companies, and as many small scale-miners are not employable by the companies, they do not benefit from the created jobs. The probable root causes centre on the question of land rights and differences in economic conditions between the local communities and mining company staffs.

**Box 5: Some typical issues and challenges facing wildlife and mining addressed by stakeholders at national level**

“There has been a steady decline in wildlife numbers and species” (Kenya)  
“A common concern is the crude means in which the extraction and harvesting processes [of sand and clay] are conducted” (Kenya)  
“The communities appreciate the fact that these natural resources [minerals] are not in unlimited supply and are already faced with some undesirable impacts” (Kenya)  
“Inadequate wildlife user rights” (Tanzania)  
“Deforestation and loss of wildlife habitats are also the consequences of high population pressure” (Tanzania)  
“The sector is characterised by poor mining methods and under utilisation of mineral resources” (Uganda)

*4.3.7. Urban based economy*

The rich resources of the lake basin grants numerous opportunities for development of an urban economy based on inputs from the surrounding regions, especially for industries processing and manufacturing products based on agricultural produce, livestock and fish. However, development of the processing sector is often constrained by inadequate physical infrastructure and access to information technology as well as lack of industrial traditions and networks, managerial and technical skills.

Increased urbanisation has put pressure on open land and forests surrounding urban areas as well as on marginal areas within the cities and towns where extensive in-migration has added on to unplanned squatter areas with inadequate provision of infrastructure and services.

In the absence of common, basin-wide policies and regulations for the management of natural resources for industrial production, individual users often make decisions that negatively affect other users. Given the resource constraints and population pressure, the desperation of poverty tends to lead to behaviour that spiral poverty and long-term objectives of sustainability are abandoned for immediate survival. Laws and regulations intended to control unsustainable practices are weak and penalties too small to act as a deterrent.

Laws and regulations for the industrial sector – including corporate and contract laws, labour regulations and land ownership issues – are generally outdated, internally inconsistent and in need of harmonisation across the countries. Incentives to promote industrial investments, trade and tourism are inadequate and a major barrier to development of the urban economy.

#### 4.3.8. Physical infrastructure

Technical infrastructure is a precondition for socio-economic development. Not only is a well functioning, reliable and affordable technical infrastructure supporting machinery for economic development, but it is also a necessary prerequisite for social infrastructure to work satisfactorily and be able to reach out to the population. Technical and social infrastructure is interlinked. Effective technical infrastructure is a crucial precondition for social infrastructure to work properly. Both types of infrastructure face critical limitations in most parts of the lake basin.

#### **Box 6: Some typical issues and challenges on physical infrastructure addressed by stakeholders at national level**

“The importance of good connectivity as an essential ingredient for accelerated development cannot be overemphasised” (Kenya)  
“The absence of all weather roads in most district of the Lake basin has hampered access to farming hinterlands.” (Kenya)  
“Lack of accessible, safe, clean and quality water supply“ (Tanzania)  
“Deteriorating lakes water quality leading to, among others, reduced ability of water to support other uses especially transportation” (Tanzania)  
“Poor road network, communication and information technology” (Tanzania)  
“Poor and inadequate utilities such as telecommunications network, water and electricity both in urban and rural areas” (Uganda)  
“Poor feeder road network impassable during the rainy season” (Uganda)  
“Unplanned settlements and lack of physical planning” (Uganda)

The EAC Treaty emphasises co-operation in infrastructure development to increase more co-ordinated, harmonised, and complementary systems of transport and communication. In the present EAC Development Strategy (2001-2005) particular emphasis is put on the need to reach better co-ordination of policies, national priorities and actions to improve infrastructure within these areas (in addition to the energy sector). Recent studies undertaken by EAC<sup>9</sup> confirm that the present state of physical infrastructure in the lake basin is far from adequate to support development in most sectors of the economy. The study concludes on the present situation as shown in Box 7 (next page).

<sup>9</sup> *The Economic Potentials and Constraints for Developing Lake Victoria Basin as an Economic Zone* (October 2002). *Private Sector Development Strategy* (First Final Draft, November 2002).



### Box 7: Some conclusions from the EAC Study on the economic potential of the lake basin

#### Transport sector:

- Development of the *road infrastructure* is the major task within the Basin Area. Rural roads are unpaved earth roads, the majority of which are in a poor state of repair and difficult to access during the rainy season. Road maintenance is irregular, limited to spot improvements and carries a huge and increasing backlog. Food production and marketing are badly hit by this situation.
- *Water transport* on Lake Victoria is important both for passengers and cargo, but lacks regional co-ordination and upgrading and rehabilitation. The informal sector plays a major role in inland water transport.
- *Railways* are generally in a poor condition and need huge investments to upgrade tracks and rolling stock as well as improved management. *Regional airports* have little capacity and need upgrading and modern facilities.

#### Telecommunications

- Even though telecommunications have increased greatly during the recent years, these services are primarily concentrated to the major towns, leaving rural areas outside district headquarters or major market centres with limited access to telephone facilities. Privatisation is an essential component in strategies to expand and upgrade telecommunications.

#### Water supply and sewerage systems

- Only the major urban areas have water supply schemes/networks that can provide safe and clean water for consumption. Outside cities and towns protected sources (boreholes and wells) are generally fit for domestic use, but easily contaminated or dry up during long dry seasons.
- Urban sewers and sewage treatment systems are generally in a bad condition and raw sewage is often disposed directly to open water. Rural areas, and also in some urban and peri-urban centres rely almost exclusively on pit latrines for human waste disposal.

At *regional level* it is noted that the lake basin has experienced inadequate economic growth to provide employment opportunities and income to sustain the growing population and to reduce the level of poverty in the region. Lack of basic infrastructure combined with unattractive investment climate and limited human resource capacity result in an inability to harness the great potential offered by the natural resources of the lake basin.

Locally generated surplus is channelled outside the region. More specifically, the region faces declining (per capita) production within fisheries and agriculture. Reduced fish catches, inefficient subsistence farming methods, declining soil fertility and post harvest losses as well as limited market access are the major problems that will have to be addressed to correct the present trends. The challenges at regional level needed to correct the present situation are summarised as follows:



## **Box 8: Summary of threats and challenges on production and income generation addressed at regional level**

### **Unemployment**

- A large proportion of the population is unemployed or underemployed and many labour intensive small scale and medium size industries have collapsed;
- There is limited private sector and community participation in production.

### **Poor technical infrastructure**

- Poor state of roads, water transport and telecommunications network;
- Underdeveloped railway system;
- Low coverage area for energy supply;
- Alternative sources of energy not yet fully exploited (geothermal, solar, wind).

### **Lack of institutional framework and capacity**

- Inadequate institutional and regulatory framework conducive to income generation and productive systems;
- Inadequate incentive and business promotion structures to attract local and foreign investors (investment capital and savings);
- Limited availability of credit and micro-finance institutions;
- Limited market access (fish and farm products) and marketing systems;
- Wrong or inappropriate training of people;
- Limited research facilities (crop and livestock diseases) and extension services.

### **Norms, attitudes and behaviour**

- Poor saving culture, particularly among fisher folk.(incomes are consumed immediately);
- Wrong attitudes to work, especially against engaging in fishing, mining and agriculture.

### **Access to utilisation of resources for all**

- Gender inequality in access to resources and means of production;
- Unexploited potential of resources especially in mining and tourism;
- Land use conflicts (wildlife conservation versus human interests);
- Dependence on rain fed agriculture;
- Poor and unfertile soils;
- Huge post harvest losses;
- Inappropriate technologies and poor inputs (farming, mining and fisheries).

#### **4.4. Policy area 3: Living Conditions and Quality of Life**

Satisfactory living conditions and quality of life – including the possibility to meet basic need from one’s own resources – are essential preconditions for economic development. These issues are closely and irrevocably interlinked. Alleviation of the present deep poverty – with more than half of the Lake basin population living below the UN poverty line of 1 USD a day – as well as the provision of basic health services and education – will be the main elements in a strategy for sustainable socio-economic development in the lake basin.

##### **4.4.1. Fighting poverty**

The capacity of human beings to cope with social and economic life is central to the concept of sustainable development. Poverty affects the quality of life in all senses. Poverty reduction implies addressing a series of vicious circles and self-reinforcing processes that sustain high excessive population growth, pressure on natural resources, environmental degradation and poor governance. Poor people often take risks even where there are restrictions, e.g. illegal charcoal burning, soil mining, encroachment of wetlands and forest reserves, and the use of poison in fishing. The various dimensions of poverty also leads to situations of powerlessness, strengthened by limited formal education, limited awareness of rights, and the inability of people to influence or participate in making decisions on key issues that affect them.



**Photo 6: People use and process the remains of Nile Perch close to a commercial fish factory in Kisumu, Kenya (by Grete Klavenes).**

Reducing and tackling poverty will need co-ordinated strategies and concerted actions across most policy areas, among others

- *Agricultural policies*, e.g. extension services and the use of tools and technology, farm inputs, credit and micro finance schemes, access to markets) and the establishment of social safety-nets to cope with weather-related short-term income fluctuations;
- *Natural resources policies* to support for survival and coping strategies;
- *Primary education* (e.g. access to primary school education, increased quality, teacher/pupil ration and addressing the inhibiting effects of cost-sharing);
- *Primary health care* (e.g. addressing inequalities and weak services provision especially in the rural areas, and limited involvement of the poor in the design of health programmes);
- *Governance* (including increasing transparency and accountability, notably at lower levels of Government and more targeted economic support for sectors most central to poverty reduction);
- *Gender issues* (e.g. social and cultural issues with impacts on gender discrimination like customary property and ownership rights of, employment opportunities, and participation in decision making at national and local level).

Although poverty remains pervasive and deep in most parts of the Lake basin, living conditions vary greatly between different regions; regional disparities seem to have increased. Deep poverty at household level is predominantly a rural phenomenon with the poor being concentrated in subsistence agriculture. However, urban poverty is also widespread and on the increase, partly due to rural-urban migration. Urban poverty is particularly observable among the young, the old and the underemployed in the informal sector.

#### **Box 9: Some typical poverty issues addressed by stakeholders at national level**

“Poverty is extensive and communities are extremely vulnerable to changes in the resource situation and economic conditions” (Kenya)  
“People suffer from insecurity in the region and on the lake” (Kenya)  
“Living conditions and poor quality of life are mainly determined by agriculture, health and social services and education sectors” (Tanzania)  
“Poorly developed agro-industry” (Tanzania)  
“Poverty is further aggravated by HIV/AIDS pandemic” (Tanzania)  
“Poverty and health are the key concerns of the stakeholders” (Uganda)  
“Environmental degradation is contributing to increased poverty” (Uganda)  
“Poverty alleviation programs do not reach the grass-roots” (Uganda)

#### **4.4.5. Health**

Bad human health is a threat to productive capacity as well as to individual well-being. The HIV/AIDS pandemic, tuberculosis and malaria constitute major hazards to human health in all parts of the Lake basin. Despite public awareness campaigns HIV/AIDS continues to strike the poor who are put at risk by their economic

circumstances. Traditional support systems are failing to cope with the increasing AIDS orphans. In the agriculture sector, increased morbidity and mortality has resulted in cultivation of less land, and a shift to cultivation of less labour demanding crops owing to time and resources spent on care.

Aside from the personal suffering and distress, households are strongly hit by the loss of their income earners, and as deaths occur, also the loss of savings to cover funerals and to support destitute family members. Reduced incomes invariably affect the general situation of food supply and nutrition. In particular the rural population is vulnerable to even small disruptions in food production and supply. Not only productive capacity, but also local knowledge and skills are lost as people die or leave the community.

*Malaria* is by far the most frequent illness and cause of mortality in the basin, and rages largely unchecked. The problem is exacerbated by the impact of urban growth into new areas without adequate public health measures. The prevalence of tuberculosis is on the increase throughout the lake basin for the first time in many years. There is a growing understanding that the prevalence of HIV/AIDS, tuberculosis and malaria is strongly interconnected and mutually reinforcing. Due to increased rate of travel and migration, stimulated by rapid development and new employment opportunities, e.g. in the commercial fishing industry, the infection rates of sexually transferred diseases, in particular HIV/AIDS, have increased dramatically.

*Nutritional status* is not only an indicator of quality of life, but also a prime indicator of socio-economic development. A series of factors influence the nutritional status: the availability of and the balance between production for the market and subsistence, culturally based eating habits, income, family sizes, level of education and the awareness of the importance of nutrition, especially among mothers. Also the high prevalence of HIV/AIDS and its consequences has huge negative impacts on the nutritional situation. *Malnutrition* is a major underlying cause of the high child mortality in the region. Malnourished women face risks in delivery, sometimes causing maternal mortality, and are likely to also have malnourished children.

The existence of *primary health facilities* – curative as well as preventive – is a core factor to combat poverty. In most parts of the lake basin access to health facilities such as hospitals and dispensaries is limited, unevenly distributed and in number barely keeping pace with the population increase. The situation is particularly critical in the rural areas and in isolated fishing villages with severe lack of qualified personnel as well as drugs. Preventive measures have focused on polio vaccination, malaria and HIV/AIDS protection.

### Box 10: Some typical health issues addressed by stakeholders at national level

“High prevalence of diseases coupled with poor health facilities has led to high infant mortality and adult morbidity. Present health facilities cannot cope with high population growth” (Kenya)

“The HIV/AIDS pandemic has led to a large population of orphans, widows and widowers and is exacerbated by socio-cultural beliefs and practices increasing the risk of contracting the disease as well as hindering the control of HIV/AIDS” (Kenya)

Most of the health problems ... can be attributed to communicable diseases” (Tanzania)

“Adverse impacts of HIV/AIDS [and] deteriorating access to health facilities ... are major problems and challenges in health and social services areas” (Tanzania)

“High mortality and morbidity is due to poor hygiene and sanitation as well as poor nutrition” (Uganda)

“HIV/AIDS pandemic is still prevalent and poor health standards make preventable diseases rampant” (Uganda)

#### 4.4.6. Education

Education is a precursor to improvement in quality of life and sustainable development. Illiteracy and poverty are closely interlinked. Knowledge and skills are crucial inputs to economic development and creation of industrial employment opportunities. Education has a significant bearing on the ability to access information and the possibilities of creating awareness with regard to health issues, improved production methods, environmental conservation and resource management. The level of education in the population impacts on the sense of empowerment and participation in development processes particularly in addressing poverty.

Higher education and scientific research are both instrumental in generating economic growth apart from having intrinsic values and benefits in themselves. Institutions of higher education are potential vehicles in providing necessary data and knowledge needed to formulate and operationalise sustainable development strategies for effective utilisation of the vast resources of the lake basin.

The situation for primary education varies as national education policies have been rather divergent in the three partner states. The major challenge in all partner states is improve access to primary education by providing new facilities and increase school enrolment, with a particular focus on girls' situation.

The combined challenge facing the education sector is one of ensuring access, raising the quality of education and learning materials as well as the recruitment of fairly paid qualified teachers. In all countries national policies and action programs have been launched to radically expand primary school enrolment, to build new classrooms and to improve the quality of education and address gender imbalances in the education system. In particular policies of cost sharing will have to be reviewed in light of its social consequences.



### **Box 11: Some typical education issues and challenges addressed by stakeholders at national level**

“Limited access to education by the majority leads to a vicious circle of poverty and illiteracy” (Kenya)

“Low incomes, poverty and low levels of education are closely interlinked” (Kenya)

“In the education sector major problems include inadequate facilities for schools (classrooms, teaching materials, houses for teachers) and less relevant curricula in primary and post primary levels” (Tanzania)

“Inadequate involvement of communities in the education planning process” (Tanzania)

“High rates of school dropout, especially for girls” (Uganda)

“The general level and quality of education is very low” (Uganda)

#### *Access to safe water and sanitation*

Access to safe water and adequate sanitation is a critical health factor. Municipalities have problems in keeping up with the growing population’s need for basic urban services such as water supply, garbage collection, and sewage disposal. These public services are extremely limited in the rural areas. There is a critical shortage of clean and safe drinking water. The deterioration of water supply systems in strong need of maintenance as well as the increasing pollution of rivers and streams has left many communities with unreliable and unsafe water.

At *regional level* the increased vulnerability for socially disadvantaged groups, especially women and children, has been regarded the major challenge, including inadequate educational opportunities and provision of health services. In addition to access to safe water and sanitation, issues related to the development and provision of physical infrastructure, both in urban and rural areas, were emphasised as crucial elements of good living conditions and income generation needed to combat poverty (see Box 12, next page).



## Box 12: Summary of threats and challenges on living conditions and quality of life addressed at regional level

### Increasing vulnerability of the people

- Over-burdened women facing retrogressive attitudes, cultures and practices;
- Low opportunities for youth, elderly and disadvantaged groups;
- High prevalence of HIV/AIDS with adverse impacts;
- Widespread income poverty. Key issues: many people living in slums, people cannot afford basic needs, poverty resulting in environmental degradation;
- Food insecurity and poor nutrition standards;
- Poor human settlements in urban and rural areas (unplanned poor quality settlements with low sanitation coverage, poor waste disposal);
- Increasing unemployment;
- Insecurity on the Lake and in the region.

### Water supply and sanitation

- Low level coverage of water supply services in rural areas;
- Inadequate water and sewerage services in urban areas;
- Physical infrastructure;
- Poor state of infrastructure of road, water transport and telecommunication network;
- Underdeveloped railway and air transport systems;
- Low coverage area for (electric) energy supply.

### Health Services

- High prevalence of diseases (e.g. malaria, tuberculosis, pneumonia, typhoid, cholera, dysentery, HIV/AIDS, STDs);
- High infant mortality due to poor sanitation and hygiene;
- Inadequate health infrastructure and health services, including lack of regular supply of essential drugs and hospital supplies, in rural and urban areas.

### Education and training

- Insufficient education infrastructure and facilities schools (classrooms; teaching materials, houses for teachers);
- Low quality and less relevant curricula;
- Poor access to education by disadvantaged groups (disabled, orphans, poor those who can not afford to pay, school dropouts, girl children).

#### **4.5. Policy area 4: Population and Demography**

Development is significantly influenced by the growth and composition of the population. Demographic characteristics of the Lake basin and observed trends are challenges to the Basin's momentum for development. Chapter 5 (pp. 62-66) of the Baseline Information Report provides more detailed information on population issues in the lake region.

Over time the demographic structure of the population is likely to change dramatically: First of all the life expectancy will drop remarkably. Orphans have already become a significant part of the population, at present an estimated 2, 5 million are orphaned in the lake basin. Fewer children will survive their childhood and the productive work force will diminish due to deaths and increased absenteeism. Elderly people will lose their support as working family members disappear. In the end this will have effects on economic growth as well as on the competence and skill of the work force.

Policies and strategies for a more sustainable development will have to take due consideration population factors. Ecological and environmental health, the potential for socio-economic development and the provision of public services are strongly influenced by population dynamics. The high population growth in the Lake basin, alongside widespread poverty, creates unsustainable extraction of natural resources and environmental degradation. The rapid population growth is not matched with employment opportunities and economic growth making it possible for the governments to meet peoples' needs in the areas of health, education, technical and social infrastructure. In some areas the influx of refugees also significantly adds to the population pressure.

The high level of poverty is attributed to an increasing population, the weak economic base and increasing pressure on natural resources. A 'healthy' balanced composition of the population is a crucial precondition to meet with future challenges in food production, community development and in creating a basis for democratic development and good governance, as well as the building of skills, competence, and institutional capacity.

The HIV/AIDS pandemic and other diseases with high mortality threaten a 'healthy' composition of the population with their heavy toll on the productive work force and the transfer of responsibility to the older generation for family income and care. HIV/AIDS has had a devastating impact on the population characteristics of the lake basin, most significantly in the most productive age bracket and also resulting in a major increase in the number of orphaned households.

In many local communities children provide a considerable part of the labour inputs in agriculture, livestock herding and the fishing industry. This effects school enrolment and contributes to vicious cycles of persistent illiteracy and poverty.

High population growth through fertility and migration has implications for service delivery and resource conservation. The rapid population growth in the lake basin is not matched with socio-economic growth, making it difficult for governments to meet their populations' needs in the areas of health, education, technical and social infrastructure, extension services in agriculture etc. This in turn retards socio-

economic progress, and negative spiralling effects occur. In particular, women and children are disproportionately negatively affected by the consequences of rapid population increase. In urban areas, migration due to economic pressure and scarcity of land contributes to the expansion of slums, often in marginal areas (wetland and flood prone areas) with major housing and sanitation problems.

Unsustainable management practices, consumption and production patterns are contributing to unsustainable use of natural resources and environmental degradation. With the state of the natural environment in the lake basin already being critical, one will have to anticipate that the present population dynamics and migration patterns will lead to accelerated environmental degradation, unless urgent action is taken. Given the current depletion of resources, demographic, and economic trends, one can hardly expect that the situation will improve significantly. A major challenge, therefore, is to achieve a more moderate population growth rate, improved living conditions and a more fair distribution of access to resources to reduce migration pressure.

**Box 13: Some typical issues and challenges on population development addressed by stakeholders at national level**

“The population pressure and exploitation of the resources without a natural balance has resulted in diverse insecurity” (Kenya)  
“Poor adoption of birth control methods, with men taking a backstage viewpoint” (Kenya)  
“High population growth through fertility, migration and refugees has been an issue impacting service delivery and resource conservation”(Tanzania)  
“In recent years HIV/AIDS has had a devastating impact on resident of the Lake basin” (Tanzania)  
“High population growth put heavy strain on limited resources” (Uganda)  
“Lack of awareness of population issues, negative attitudes towards family planning” (Uganda)

At *regional level* the overriding population problems were connected to the rapid population growth in the lake basin and the loss of the productive segment of population attributed to the effects of HIV/AIDS. Also the increasing rural-urban migration and the influx of refugees were highlighted as issues that should be subject to formulation of regional policies. Issues of rapidly growing numbers of water and road accidents have also been added as shown in Box 14.

### **Box 14: Summary of threats and challenges facing population development addressed at regional level**

#### **High population growth rate**

- High fertility rate;
- Low contraceptive prevalence rate, teenage pregnancies and early marriages;
- Ignorance of reproductive health rights and choices;
- Low literacy levels and high school dropout rates, particularly for girls;
- High adolescent/young population ration (dependency rate) which has built-in population momentum and creates high dependency.

#### **Cultural and social behaviour and practices**

- HIV/AIDS causes loss of productive members of the population;
- Harmful cultural sexual practices (widow inheritance, circumcision, 'fish for sex').

#### **High mortality and morbidity rates**

- High infant mortality, high maternal mortality and morbidity;
- Too many children, too early, too close and too late;
- Attendance by unskilled and untrained personnel;
- Inaccessibility and affordability of health care;
- Negative perceptions and attitudes that affect health seeking behaviour.
- Poor nutrition standards.

#### **Rapid and uncontrolled migration and immigration**

- Growing number of internally displaced people;
- Influx of refugees;
- Growing instability, insecurity and conflicts over water resources;
- Drug Abuse, growing number of street children and child labour.

#### **Growing number of road and water accidents**

- Increasing deaths and injuries from water and road accidents.

#### **4.6. Policy area 5: Governance, Institutions and Policies**

Questions of transparency and accountability of public institutions, as well as those of responsiveness and the occurrence of corruption and malpractices are central to questions of good governance. The role and importance to address issues of equality and gender are very explicitly addressed in the national reports. Although genuinely of a crosscutting nature, governance will also be considered a separate policy area. Chapter 6 of the Baseline Information Report (Annex 1) gives more information on some of the issues discussed below.

##### *4.6.1. Harmonisation of laws, regulations and policies*

Many barriers to a more sustainable development of the Lake basin result from the fact that national policies and legal framework in the partner states are at variance and in need of harmonisation. The present steps taken by EAC to address the question of legal harmonisation – and the approved set of guiding principles for mutual harmonisation of laws and regulations – aim at correcting this situation.

As a general observation the sectoral organisation of resource management compromises the synergy required for co-ordination of economic, social and conservation efforts in all three countries. Resource management in fisheries as well as in forest and agriculture suffers from predominantly sectoral perspectives and approaches. Present policies and laws are typically addressing issues specific to the various sectors and many laws are weak on enforcement measures. Policies and legislation are often overlapping or even conflicting. Existing regional institutions like Lake Victoria Fisheries Organisation (LVFO) and Lake Victoria Environment Management Programme (LVEMP) either have a too narrow range or a limited mandate for taking transboundary policy initiatives and implementing action.

The *Draft Protocol on Sustainable Development of the Lake Basin* and the overall principles for resource management and socio-economic development on which it is based correspond closely with the conceptual model of visions and strategies developed under this project. However, some important issues are not fully covered by the draft Protocol, like the necessity to develop common, harmonised policies of poverty alleviation, the need to address the HIV/AIDS pandemic and, more generally, policies directed towards the quality of life aspects essential to confront the challenge of sustainable development.

**Box 15: Some typical issues on harmonisation of laws and policies addressed by stakeholders at national level**

“Several institutions are engaged in resource management of the Lake Victoria Basin, but these institutions often pursue their own sector based priorities and approaches” (Kenya);  
“Major gaps exist in the area of legislation, improved administration, wider community participation and resource management” (Kenya);  
“Limited administrative capacity, financial constraints, corruption, low accountability, lack of transparency by both central and local governments have been identified as some of the threats to good governance” (Tanzania);  
“Different legislation in the three countries promotes conflict of behaviour along common borders” (Uganda);  
“Pre-independence agreements constrain free and productive use of water resources” (Uganda).

*4.6.2. Decentralisation, public participation and the role of Civil Society Organisations*

The principle of subsidiarity is laid down in the Draft Protocol for Sustainable Development of the Lake Victoria Basin. Decentralisation and devolution of power from central to local authorities are key elements in putting this principle into practice. Decentralisation aims at creating units at district and community levels, with power and financial means to run public services and develop and implement action plans. The strength, span of authority and capacity of such bodies will have a direct effect on the prospects of realising Lake basin vision and strategies.

Reform programs aiming at decentralisation and devolution of power to local government authorities have important impacts on the conditions for decentralised resource management and local empowerment in general. The general picture, however, is that local authorities are completely dependent on central government for funding of recurrent expenditure, and even more so for development projects. Such are nearly exclusively allocated from central government from external sources (donors, NGOs and CBOs). Development activities and programs are to a large extent implemented outside council plans and budgets. This affects the sustainability and authenticity of participatory planning and community participation in decision-making as well as easily alienating democratically elected representatives. Local authorities also face problems of capacity both in terms of financial and human resources.

A great number of civil society organisations operate throughout the Lake basin. Although increasingly playing a more prominent role in planning and implementing development projects, there is also often competition between them to get the attention of donors and – subsequently – lack of co-ordination, cooperation leading to duplication of activities and waste of scarce resources. Poor strategies and mechanisms for phasing-out projects and programmes often have negative effect on the ability of local communities to take over and sustainably run the activities from their own resources.



### **Box 16: Some typical issues on decentralisation and participation addressed by stakeholders at national level**

“Limited administrative capacity especially on integrated development activities” (Tanzania)  
“Growing insecurity due to civil wars in neighbouring countries” (Tanzania)  
“No favourable laws for sharing of resources between central and local governments” (Uganda)  
“Inadequate collaboration between local governments and NGOs and among NGOs often leading to duplication of activities and waste of resources” (Uganda)

#### *4.6.3. Conflict awareness and mechanisms for conflict resolution*

The lake basin is a resource-defined ecosystem where conflict may occur between a great number of stakeholders with specific interests and inter-relationships as well as restricted perceptions of the resource situation. Conflicts – those being clearly observable today as well as those likely to occur in the future – are closely associated with the utilisation, management, and control of natural resources. Access to resources critical for subsistence and the distribution of goods and benefits from economic exploitation of natural resources, stand at the core of the poverty issue.

The case of implementing shared visions and strategies for sustainable development of the lake basin will to a large extent centre around the ability and capacity of the partner states to manage conflicts among a wide range of stakeholder interests. As discussed in Chapter 3 some of the manifest conflicts primarily relate to situations of access to or control over resources that, if not attended to, may develop into future social and political conflict and unrest. In other cases potential conflicts raise from lack of government co-ordination, co-ordinated intervention and law enforcement, which have or may eventually lead to conflicts between economic actors, sectors and levels of government.

A situation of uneven distribution of fish resources across the lake, increased competition among fishers and fish processing agents give rise to conflict over national control of lake waters. Conflicts occur between different users of natural resources and pertain to the question of access to, utilisation and control of these resources. Probably the most typical of such conflicts are the effects on artisan fishing by the gradual take-over by a commercial fishing industry directed towards processing fish for export, conflict over land use and access to land as well as conflicts between nature conservation and utilisation of local resources. A third example is the observed influence of industrial development on traditional economic activity, e.g. conflict between mining companies, local communities and traditional small-scale miners on mining plots and rights. Often these conflicts boil down to the question of natural resource management: To what extent should the management and control of natural resources be entrusted in local or central government? Should responsibilities be institutionally split between sectors or concentrated in one single agency? Typical of this situation is how the overall management of water tends to become lost to discussions on how water is used by specific sectors and interests.

Resource scarcity, environmental degradation and poverty are closely linked. As resource scarcity increases, competing resource utilisation become causes of conflict with particular effects on those most depending on primary production for their livelihood. One aspect that is usually ignored is the implications of poverty for *governance* in terms of the direct bearing of poverty on social strife and civil unrest in the region, with consequences for whole populations. It is often overlooked, even ignored, that questions of allocation of goods, benefits and disadvantages are always *political* processes, i.e. on the distribution of political power to influence decisions. Poverty is generally closely linked to lack of political participation and influence in decision-making processes.

Culture, tradition and gender are also social factors with built-in dimensions of conflict on allocation of goods and benefits, advantages and disadvantages. This is particularly observable in the role of gender in getting access to resources and the opportunity to engage in resource based economic activity – e.g. in fishing. Problems related to land-ownership and access to finance and support services in agriculture are other typical examples.

#### **Box 17: Some typical conflict issues addressed by stakeholders at national level**

“There have been incessant border conflicts in Lake Victoria between Kenya, Uganda and Tanzania, due to no clear border demarcations” (Kenya)  
“A lack of harmonised fishing policies between the three riparian countries” (Kenya)  
“Lack of security on the lake” (Kenya)  
“Unauthorised utilization of resources from neighbouring countries especially Kenya” (Tanzania)  
“The fact that Lake Victoria is a common resource implies that there are many people that are interested in it” (Uganda)  
“Lack of mechanisms to control and regulate the mushrooming fishing industry in all three countries” (Uganda)

At *regional level* major challenges related to issues of governance, institutions and policies emphasised were summarised as shown in Box 18 (next page).

## **Box 18: Threats and challenges facing issues of governance, institutions and policies addressed at regional level**

### **Governance and human rights issues**

- The existence of corruption at all levels of government;
- Insufficient transparency and accountability in public decision making;
- Inadequate civic education and ignorance of human rights by most of the law enforcement authorities and the public at large.

### **Harmonisation of laws and regulations**

- Absence of crucial common regional policies (e.g. food security irrigation, fishing, gender, education subsidies and auditing);
- Un-harmonized resources management legislation (fishing settlements, water);
- Pre-independence agreements constraining free and productive use of water resources.

### **Decentralisation, devolution and participation**

- Poor mechanisms for resource mobilization at local government level;
- Inadequate tooling at local government levels;
- Inadequate community empowerment;
- Low levels of literacy;
- Financial constraints;
- Inadequate financial decentralization;
- Limited decision making by socially vulnerable groups (Women, youth, elderly and refugees);
- Lack of ownership, control and access over resources by the youth;
- Lack of local participation;
- Lack of coordination between Government and NGOs.

### **Institutional framework, capacity and competence**

- Weak institutional framework: and low institutional capacity at all levels;
- Limited administrative and human resource capacity and competence on integrating development challenges;
- Lack of integrated planning (dominance of top down, sectoral planning).

### **Law enforcement and security**

- Ineffective implementation and laxity on implementation of laws;
- Lack of access to information on legal matters;
- Growing insecurity and lawlessness;
- Piracy on the lake;
- Cattle rustling;
- Traffic offences (overloading, over-speeding, noisy matatus, attitude of transport service providers).

### **Conflict resolution and conflict management**

- The existence of conflicts (water use, border conflicts, lack of clear boundary demarcations in the lake);
- Lack of security on the lake;
- Inadequate systems for resolving disputes over resource use at local and regional level;
- The issues of indigenisation.

#### **4.7. Gender aspects**

Gender issues are critical to economic and social development in the lake basin and cutting across all policy areas. A logical consequence is, therefore, to bring together and develop this perspective as a separate policy area closely linked to issues of policy development, legal harmonisation and conflict resolution.

Women in the lake basin play a major role in natural resource utilisation and management even though their access to and control over natural resources is limited. Women have a principal role in providing household earnings, food security and nutrition as well as in child upbringing and care. It is estimated that women contribute 90% to food production. However, as a major part of women's productive activity is localised in the informal economy, the full contribution of women to socio-economic development is not represented in official statistics.

A great majority of rural households is headed by females, often as full time smallholder farmers, the majority of which are poor and vulnerable to even small changes in economic conditions. With increasing commercialisation in the agriculture sector women tend to lose control over resources, proceeds and household food. Ownership rights for women are central to increase food production and ensure high level of food security in the lake basin. However, the access to and use of land and natural resources is generally gender-biased. In addition to having little control of land, women have also limited access to credit and extension services, the same tendency also applies to access to education.

The fisheries sector has clear gender characteristics, with men fishing and women engaged in fish trading and small-scale, non-commercial fish processing. Although more women now engage in the fisheries on a commercial basis, exploitation of women at landing beaches is still widespread in which fishermen demand sex from fishmongers before selling. With declining resources, this practice has become rampant and accounts, at least in part, for the increasing prevalence of HIV/AIDS around the lake.

Gender is a key basis of social marginalisation and exclusion. Households headed by women tend to face more problems regarding food security, quality of housing, and access to basic services than households headed by males. Women face higher levels of poverty, illiteracy and poor health, and as environmental degradation increases, women have to spend more time in accessing water, fuel wood and land for cultivation. There are disparities associated with the differences in education resources, competing employment opportunities and cultural barriers that deny girls education. Despite policies and interventions to the contrary, more girls still drop out at upper primary levels and secondary levels due to demand for domestic labour and contributions to the household economy, early marriages and pregnancies, and parental preference for boys' education.

The gender aspects of HIV/AIDS are obvious. The pandemic has exacerbated the social, economic and cultural inequalities between women and men in the Lake basin, as well as affected family structures – for instance accentuating the feminisation of poverty by increasing the number of poor female-headed households. Not only are women hard hit by the epidemic, but also the burden of looking after and nursing the sick fall onto the women and add on to the demands for income earning,

household work and child care. As girls are likely to be retained at home to nurse HIV/AIDS patients, there is bound to be disparity in the boys/girls ratio in school enrolment in favour of boys.

While there have been efforts to redress gender imbalances through gender responsive policies, implementation still meets barriers mainly attributed to persistent social norms and cultural attitudes and practices. Culture has significant influence on gender relations, roles, division of resources and sharing of benefits. These practically permeate all sectors and have influence on the quality of life, with implications for production, environmental and natural resource management.

### **Box 19: Some typical gender issues and challenges addressed by stakeholders**

“Land ownership by women is still a problem in most districts” (Kenya)  
“There are gender inequalities in fishing; this area is still men’s preserve (Kenya). Gender has played a key role as a base for marginalisation and exclusion of specific groups to take part in development and enjoying benefits from it” (Tanzania)  
Laws are not harmonised and give a loophole for denying rights of women to inherit from diseased husbands” (Tanzania)  
“Local communities lack sensitivity of gender issues”(Uganda)  
“Inadequate target specific community development programs for women and youth” (Uganda)

At *regional level* gender is regarded as and integral part of other policy issues as well as an explicit policy area, noting that to reduce the gender inequalities facing women in production and reproduction, such policies will have to be expressed as an overall governance issue.

### **Box 20: Overall gender issues addressed at regional level**

#### **Gender roles and relations**

- Inequality and marginalisation on the basis of gender with regard to access to resources, services, production, reproductive health and rights;
- Domestic violence and abuse of women and children, and of criminalization of such violence;
- Certain cultural, religious and social norms and practices discriminating against women and other vulnerable groups which negatively impact their health and productivity.



## 5. VISIONS, STRATEGIES AND INDICATORS

The first part (5.1 – 5.7) of this chapter presents the national and regional policy area visions. These might be termed the “Five Foundations for Sustainable development of Lake Victoria Basin”. Chapter 5.1 also describes how the policies and overall vision for the Lake basin should be linked to a set of suggested strategies to guide future regional action programs needed for implementation of the Vision(s).

The second part of Chapter 5 (5.8 – 5.9) presents the national visions and the overall shared vision for the Lake Victoria Basin. The visions are results of intensive participatory processes throughout the Basin involving more than 12 000 villagers and representatives of civil society, business organisations, NGOs and government institutions at different levels in the three partner states. The process of harmonising this huge input from a wide selection of stakeholders has been a genuine ‘bottom-up’ process from community level, through district and national level to finally reach out to the full Lake basin under the umbrella of EAC.

The basis for these far-reaching activities is a commonly recognised and broadly accepted understanding that Lake Victoria’s ecological health is threatened by ecological unbalance and that a wide range of ongoing economic and social processes in the whole lake basin is contributing to this situation. In general, stakeholders in the three countries have recognised the fragile lake ecosystem and the constraints for development but also pointed to the immense potential of the lake basin as an important social and economic resource that is not fully utilised. The lake basin needs a common direction – a shared vision and a set of agreed strategies – that can give guidance for actions at all levels to offset the present threats to the lake ecosystem, that give policy guidance to a more sustainable use of the basin resources to secure a more effective and equitable economic and social development.

### 5.1. Implementation of the Lake Basin Vision

Whereas the policy area visions form the basis for the national visions, and both of these forms the basis for the regional vision, the latter form the basis for prioritised strategies at regional level that is described in Chapter 6. The Vision bridges threats and challenges and suggested options and strategies to act upon these challenges. To monitor and evaluate to what extent chosen strategies really succeed in reaching the vision for a specific policy area a set of monitorable *indicators* has been suggested by the National Task Forces.

The suggested strategy framework builds on the outcomes of the national stakeholder consultations (separate volumes annexed to this report) and discussions at Regional Level (Regional Workshops in Arusha and Nairobi). The strategy framework is the basis for developing a full, long term development strategy for the lake basin.

The internal structure of a fully developed vision is a stepwise process rendering increasingly more concrete steps taken towards implementation:

*Challenges Objectives Targets Design of Action Program(s) Processes of monitoring and feedback.*

The inputs from the national reports have been the primary basis to reach at *harmonised regional visions, strategies and indicators*. For each of the five policy areas the 'bottom line' is the shared visions, priorities and harmonised strategies discussed and elaborated by the RTF based on the outcomes of the workshop in Nairobi in June and Arusha in August.

The National Reports suggest a set of strategies and suitable indicators to gauge change in the direction indicated by the vision. These are the basis for the suggested strategies and indicators reported in this chapter. *However, since these are to numerous they have been further prioritised during the regional discussions. The prioritised strategies and indicators are described in chapter 6.*

A few modifications to the output of the harmonisation process are made to simplify the presentation and to avoid duplication. In *this* chapter gender issues are presented separately, linked to visions and strategies for good governance. The reason is the specific importance of addressing questions of gender and role equity, as well as the fact that this is the only overall vision making explicit reference to gender.

## 5.2. Policy Area 1: Ecosystems, Natural resources and Environment

### 5.2.1. National visions and strategies

#### Kenya

In the Kenyan National Report vision statements for ecosystems and environment is mostly linked to vision statements for other policy areas (chapter 4). In general the report focuses on a healthy environment as the necessary basis for a viable society and economy. More specifically the depletion of forest cover and loss of biodiversity has been highlighted separately together with wildlife management, whereupon the visions was defined as:

- *“Restored, protected, conserved, preserved forests and increased availability of medicinal herbs”*
- *“Developed and sustained wildlife populations”*

The report underlines that issues of environment and ecology are automatically affected when issues relating to natural resources protection and management, socio-economic development, and governance are addressed. Further, the great vulnerability of people in respect of their access to healthy natural resources for income, food security and general quality of life, including a healthy environment is highlighted. Strategies emphasised are:

- Afforestation
- Re – afforestation
- Inventorise and protect wildlife by numbers and species diversity
- 

#### Tanzania

The Tanzanian Vision for this policy area reads:

*“Prosperous livelihoods and enhanced management of ecosystem and natural resources in the lake basin”*

The vision are further detailed for different sectors of natural resources management that can be summarised along two major dimensions regarding the desired future:

- Sustainable use and increase in productivity of agricultural, fish and mineral resources
- Sustainable management and utilisation of water, forestry and wildlife resources

The National Report suggests a broad set of strategies for conservation of the environment and more sustainable management and utilisation of natural resources.<sup>10</sup> In addition to strategies aiming at harmonisation of policies concerned

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<sup>10</sup> Some of the strategies suggested in the Tanzanian National Report are reviewed under the policy area “Production and Income Generation”.

with environmental management and creating increased public awareness on environmental conservation, suggested strategies directly concerned with ecological and environmental issues are:

- Formulation of policies for co-ordinated water resource management at national and regional level;
- Promotion of environmentally sound technologies for more efficient use of water;
- Creation of awareness in local communities on the importance of participatory forestry management;
- Create an enabling environment for private sector investment in water resources management and wildlife conservation and utilisation.

### *Uganda*

For Uganda pollution control, loss of habitat, fish and wildlife resources were the most crucial issues of concern for local stakeholders as summarised in the following set of sub-visions:

- Reduced pollution and waste levels to the lake and its catchment
- Sustainable and wise use of forests, wetlands and arable land
- Restored fish species
- A protected and vibrant wildlife

A wide range of strategies to confront the perceived problems is suggested. Four sets of policy initiatives have been identified:

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- Sensitisation of communities and creation of public awareness and transfer of knowledge on issues of environmental protection and natural resource management, e.g. afforestation and wetland management;
- Enforcement of existing environmental laws and regulations;
- Reintroduction of [lost] fish species and regulations on fishing season and methods;
- Development of more participatory approaches to resource management and monitoring at community level.

The National Report also emphasises the need for a complete overhaul and harmonisation of legislation, at national and regional level, that are “not responsive to current social dynamics”. Also the need for more continuous and comprehensive data collection on the ecological status in the lake basin in general – for the purposes of increased knowledge, monitoring and public awareness raising – is highlighted.

### 5.2.2. Regional Vision and Strategies

The Harmonised Regional Vision for this policy area as formulated by the RTF states:

#### **Box 21: The Regional Vision for “Ecosystems, Natural Resources and Environment”**

The Regional Vision for “Ecosystems, Natural Resources and Environment”:

“A prosperous livelihood and enhanced management of ecosystems, natural resources [and] a clean and healthy environment.”

### 5.2.3. Strategies

Regional discussions initially suggested a great number (more than 30) of wide ranging strategies to respond to the threats to ecosystem health and natural resources in the lake basin (see Box 22). In chapter 6 these, together with the corresponding indicators, have been prioritised and analysed.

#### **Box 22: Strategies and indicators for Ecology, Natural Resources and Environment**

<b>Sector</b>	<b>Indicators</b>
<b>A Natural Resource Management</b>	
<b>General policies and legal framework</b> Harmonisation of cross sector policies and laws for natural resources management; Enforcement of environmental laws and regulations to ensure sustainable management of the natural resources.	Number of polices, laws and regulations harmonised Number of polices, laws and regulations implemented
<b>A1 Water and water catchment management</b> Promotion of integrated water resource/water catchment management; Promotion of water quality and quantity monitoring; Intensify water hyacinth monitoring and control (including Rwanda and Burundi).	Number of flood disasters Sediment load into the Lake Water quality Coverage of weed mats Absence of new alien weeds
<b>A 2 Fish resources management</b> Promotion of sustainable fisheries policies, extension services, monitoring, surveillance and control measures;  Conduct frame surveys; Reintroduce indigenous species and control Nile perch stock	Yields of fish stocks Number of illegal nets compounded, transgressors arrested Number of surveys conducted Number of species inn the lake, number of commercial processing firms
<b>A 3 Wildlife resources</b> Conduct wildlife inventory (species and numbers) Promotion of co-management of wildlife	Size of wildlife population and biodiversity; Number of species reintroduced;  Number of ecotourists; number of community projects



Promotion of ecotourism, tourist networks and facilities in ecological habitats	Number of facilities established
<b>A 4 Land, forest and wetland resources</b> Improved land use planning Promote proper land use management practices Promote utilisation of alternative sources of energy and energy saving methods Promote establishment of community forests and woodlots/forestation/tree planting schemes	Land use policies established Forest cover / number of trees Number of people using alternative energy sources Stock density and species diversity
<b>B Pollution and waste management and control</b> Promotion of integrated waste management of solid wastes and discharges into the lake Reduce point source pollution by strengthening industrial and municipal waste management in urban and industrial centres Develop policy guidelines to control for pollution from mines Promotion of organic farming methods to reduce uncontrolled use of pesticides, herbicides and fertilizer Promotion of integrated pest/vector management throughout the lake basin	Tonnage of unmanaged solid waste Number of sewage systems established Pollutant load/concentrations to the lake Number of industries complying with discharge regulations Number of industries practising cleaner production methods Number of EIAs for projects conducted Number of mines complying with regulations Amount of agro-chemicals used
<b>C Water supply and sanitation</b> Provision of potable water and sanitation facilities Develop water sources at fish landing sites	Percentage of population served by clean/safe water Waterborne disease prevalence Number of facilities established

### 5.3. Policy Area 2: Production and Income Generation

#### 5.3.1. Natural Resources - National visions and strategies

##### Kenya

The Kenyan National Report highlights the vulnerability of people with regard to management and control of natural resources. Natural resources will have to be managed in ways that meet the needs of local communities for the present as well for the future. The role of women in this context is specifically mentioned. Participation in economic life is unevenly distributed and a small economic elite controls major business resources. The overall vision statement for this policy area

*“A vibrant industry and national economy and healthy local economy run by local business people.”*

For the different economic sectors the following goals are stated:

- A clean, safe, accessible and adequate water supply for industrial and domestic use;
- An abundant fish supply including a variety of species;
- Developed and sustained wildlife use;
- Abundant agricultural output and developed livestock.
- Sustainable exploitation of minerals in balance with nature;

To realise these visions the National Report underscores the need to develop policies and legislation to secure natural resources from uncontrolled extraction and establish procedures and practices for sustainable resource management. Steps should be taken to mobilise, and build capacity in, local communities to establish small-scale enterprises and cottage industries, individually or on a co-operative basis. As for the different sectors the following strategies are suggested:

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- Develop policy measures to protect scarce water resources (including flood plains and wetlands) from continued pollution;
- Develop fishery policies to restore populations of lost species, fish breeding areas and to control the population of Nile perch (price control and micro-finance support, regulation of fishing gear and methods, improved landing site management);
- Put in place more effective land-use policies to protect productive land resources, in particular measures for afforestation and land use policies for an agro-based economy;
- Inventories of wildlife resources and more effective measures for wildlife protection;
- Improved legal framework and regulations for exploitation of mineral resources;
- Policies to enhance more effective use of all types of energy resources.

### *Tanzania*

The Tanzanian Vision for this policy area is:

*“Resources sustainably used and managed and productivity promoted with increased income of communities in the lake basin”*

From this overall vision the following “Guiding Statements” have been developed for the various sectors

- Sustainable use and management of water resources and adequate, clean and safe water for rural and urban inhabitants
- Conserved fish stocks for sustainable yield and improved marketing channels
- Increased livestock productivity and accessible extension services to small holder farmers and livestock keepers
- Sustainable use and conservation of forest resources
- Sustainable utilization of wildlife resources
- Improved investment in mining sector and increased sustainable output of mineral resources
- Adequate energy supplies without causing environmental degradation

An array of strategies is suggested to improve the management of natural resources and to develop updated, more effective and environmentally friendly policies for their utilisation. The involvement of private sector and communities in the management of resources as well as in providing goods and services should be supported and the roles of public and private sectors should be facilitated. Financial institutions should be encouraged to support individuals and communities by offering affordable credit schemes in addition to public funds made available to enable the effective promotion and development of production sectors. Partnership between local and large scale investors to facilitate technology transfer and optimise use of resources should be encouraged. More specifically the following strategies are listed:

- Establishing legal framework for the promotion of private and community based ownership;
- Improve marketing infrastructure in all sectors;
- Facilitating public and private sector roles in improving support services;
- Enhance training to communities to acquire skills in the operation; maintenance and management of resources;
- Mainstreaming gender participation and equity at all levels of development and planning and management of natural resources.

### *Uganda*

The Ugandan process focused on visions for desired futures related to production and income generation, inter alia:

- Better water management and reduced wastes to land and water so as to better utilize the resources (e.g. conservation of wetlands and afforestation in the catchment)
- Increase in fish farming, better fish yields and better availability to fish markets
- Better exploitation of wildlife potential (e.g. tourism) and mineral resources

The suggested strategies reflect this and fall in five broad main categories:

- Policies and measures for more effective protection and conservation of resources (e.g. wetland conservation and afforestation of catchment areas);
- More effective management institutions and practices (e.g. water management, pollution control, waste disposal, sanitation and public hygiene);
- Law enforcement and strengthening of laws and regulations concerning the utilisation and management of natural resources (e.g. fishing regulations, land use planning)
- Utilisation of untapped resources, development and implementation of new (modern, more effective) approaches, methods and technologies (e.g. in agriculture, fish farming, eco-tourism, mineral extraction);
- Sensitisation of the public in relation to protection and management of natural resources (including use of alternative energy sources);

### 5.3.2. Urban based economy and technical infrastructure - National visions and strategies

#### Kenya

The National Report points to the need to improve all forms of technical infrastructure. It is noted that trade and industry in general have suffered from low investment rates during a long period of time. Special focus has been set on the need to improve the road and communication networks as part of the overall strategy to promote natural resource based production, expand access to markets for agricultural products and fish to generate income for lake basin households. The vision (extracted and rephrased from the report) reads as follows:

*“A modern, effective and efficient water, and air transport, communication and rural electrification network for improved marketing and trade [and] sufficient and affordable energy supply for all in domestic and industrial use”.*

#### Tanzania

As a precondition to promote economic activity the National Report emphasises the need to improve safe and reliable technical infrastructure (roads, lake water transport, water supply, cattle dips) as well as improved marketing infrastructure. Special emphasis is put on the conditions in the rural areas. The guiding principle for the development of infrastructure is:

*“Improve road networks, lake water transport and other infrastructure in order to be safe and reliable for all”*

Strategies formulated are:

- Attracting investors and promote private investment in lake water and road transportation networks
- Establishment of rural electrification programs
- Development of irrigation schemes
- Promoting private investment in lake water and road transportation networks

#### Uganda

The desired future (vision) for Uganda has been defined as;

- “Improved road networks, banking facilities, electrification and telecommunication services”

High priority is therefore given to strategies to develop the road network, particularly the construction of all-weather (tarmac) feeder roads in rural areas and the mobilisation of local communities in road maintenance and up-keep. The connection of water and road transport is also emphasised. Specific strategies covers:

- Attracting investors and promote investment in lake water and road transportation networks
- Establish rural electrification programs
- Develop irrigation schemes

### 5.3.3. Regional vision and strategies

This policy area covers most fields of economic activity. Development strategies for specific sectors will have to be tailored to the actual situation, options and challenges of each particular sector (e.g. as a follow-up of the report on “Private Sector Development Strategy”, EAC, 2002). The following Regional Vision for this policy area has been suggested:

#### Box 23 The Regional Vision for “Production and Income Generation”

The Regional Vision for “Production and Income Generation”:

“Resources sustainable and equitably utilised for increased income and poverty reduction in the lake basin.”

#### Strategies

In the context of strategies to support sustainable economic development in the Lake basin one would expect a clear focus on strategies for the utilisation of natural resources, keeping in mind the extreme dependence of the lake basin population on finding their daily outcome from these resources. By far, primary production plays the most important role in economic life and income generation. This focus is also reflected in the national consultation processes with the wide range of stakeholders at the community level as well as from those representing specific economic sector interests.

A wide-spanning approach to formulate strategies for production and income generation is suggested. There are also measures needed to improve the economic climate and financial conditions for new investments (including micro-finance institutions) in the natural resource based production sector. As part of this, gender specific issues will have to be more clearly focused than what is evident in present policies and legal framework.

Broadly, priority areas should therefore be:

- *Agriculture* with particular emphasis on marketing systems and extension services (including technology transfer and the use of indigenous knowledge);
- *Fisheries management* including licensing of boats and landing sites;
- *Wildlife based tourism* (protection of habitats and species).

Regional discussions also stressed the need to improve technical infrastructure, harness the hydropower potential of the lake regions as well as to develop alternative sources of energy to meet future demand. In general, the need to strengthen the industrial basis to exploit the great economic potential of the natural resources of the Lake basin was strongly emphasised. Concrete references are the prospect of tourism and irrigated agriculture. There is also a need to improve co-ordination and co-operation between on-going natural resource oriented research and management

programs in the lake and the basin (LVEMP and LVFO) as well as donor supported programs undertaken by various NGOs.

Suggested strategies and related indicators identified at regional discussions are shown in Box 24 below. The wide range and number of strategies, many of which are of a very general nature, has been further prioritised in chapter 6.

**Box 24 Suggested Strategies and Indicators for Production and Income Generation.**

<b>Sector</b>	<b>Indicators</b>
<p><b>Reducing unemployment</b> Set up proactive incentives to encourage reviving of collapsed labour incentive industries to create employment and income</p>	<p>Reduce unemployment rate Reduced migration to urban areas Increase levels of production and income</p>
<p><b>Lack of institutional framework and capacity</b> Set up or reform (where appropriate) legal, institutional and regulatory frameworks and environment that encourage efficient and cost effective utilization of natural resources in the region (e.g. Nile Treaty, Community/ District/ Local Authority Investment Committees; extension services and waste management.  Trade, investment and tourism promotion initiatives should be established to market business potential (e.g participatory committees spearheaded by the national Investment Promotion Agencies (IPAs) through Districts, Municipalities or Councils. Encourage local tourism and eco-tourism.  Encouraging financial institutions to support individuals, communities and private sector by formulating user-friendly credit schemes, promote growth of co-operative movements; encourage local and foreign investors to fill resource gaps.  Government to set aside reasonable and adequate funding to improve infrastructural provision to stimulate economic activities and market access.  Training for self employment  Improved research and development facilities to address (Dependence on seasonal rains, poor/unfertile soils, post harvest losses, inappropriate technologies and poor inputs in farming and fisheries  Enhancement of integrated pest management and veterinary research and extension services</p>	<p>Number of laws and polices reformed/repealed Number of institutions set up EIA reports implemented  Increase amount of credit disbursements to the business community  Government funds allocated Volume of traded goods (fish and farm products)  Suitable incentive policies developed  Number of research and development (R&amp;D) facilities set up New research commissioned (outputs and dissemination)  Incidents of animal and crop deceases</p>
<p><b>Norms, attitudes and behaviour</b> Address inhibiting attitudes towards work, production and income (especially in farming and</p>	<p>Number of people directly employed in productive activity</p>



<p>production and savings (especially in farming and fishing); sensitisation and training people, encourage community participation.</p>	
<p><b>Poor technical infrastructure</b> Address inadequate infrastructure (road, communication networks, electricity, phone/e-mail/internet)</p>	<p>Actual funding of infrastructure projects Length and coverage of networks (e.g. all weather roads) Number of phones</p>
<p><b>Access to and utilisation of resources</b> Support women activities and participation in fishing and mining; checking unfair competition and excesses of middlemen. Encourage value added in processing  Promotion of exploitation/ exploration of mineral potential using environmentally sound technologies (deliberate efforts to ensure that proceeds trickle back to the region for development)  Resolution of land use conflicts and environmental problems through land use planning procedures according to legislation.</p>	<p>Number of women engaged in income generating activities Amount of local ownership in production and processing Value added content of products and services Amount of income collected from mineral exploitation  Number of incidences of land-use conflicts</p>

## 5.4. Policy Area 3: Living Conditions, Poverty and Quality of Life

### 5.4.1. National visions and strategies

#### Kenya

The vulnerability of people to even small changes in economic circumstances is forcefully underlined in the National Report. The effects of the HIV/AIDS pandemic pervade most aspects of quality of life issues. Great vulnerability is closely intertwined with poverty, lack of food security and personal safety as well as gender. Somewhat rephrased the vision can be expressed:

*“A people of value and power in a healthy community free of HIV/AIDS with affordable quality education responsive to development needs”*

The following strategy options are highlighted:

- Intensified campaigns and support mechanisms for those infected and affected by HIV/AIDS and criminalisation of retrogressive gender based cultural practices and behaviour which promote the spread of HIV/AIDS;
- Provision of affordable and accessible quality health care;
- Improved management of water resources and waste to secure safe water supply and to prevent water pollution;
- Institutionalise compulsory and free basic education with relevant curriculum and reactivate youth polytechnics;
- Strengthen law enforcement, the presence of police and community vigilance structures, and provide better security surveillance on the lake;
- Strengthen cultural, social amenities and recreational activities.

#### Tanzania

The Tanzanian Vision states:

*“A well educated society with high quality of life, well developed infrastructure and free from poverty”*

A series of policy guidelines (“Guiding Statements”) for different areas are developed from this vision:

- A poverty free society with better standard of life and improved household economy
- Improved quality and access of health and social services
- Enrolment for all and improved quality of education and
- Build local capacity to effectively respond to development challenges and access to credit and financial services
- Improve road networks, lake water transport and other infrastructure, safe and reliable for all

A comprehensive list of strategies are developed in accordance with the policy guidelines:

### *Poverty alleviation and employment creation*

- Improving productivity, profitability and commercialisation of agriculture and livestock;
- Improving services for agricultural and livestock product;
- Promoting agro-processing industries in the rural areas, increasing investments in smallholder irrigation systems and improving marketing systems for agricultural products;
- Creating an enabling environment for private sector participation and building local capacity to effectively respond to development challenges;
- Facilitating access to credit and strengthening credit provision in rural and urban areas.

### *Health care and social services*

- Expanding and strengthening health programs to be targeted to the needy, such as victims of HIV / AIDS, malaria and tuberculosis;
- Strengthening of institutional capacity to implement health sector programs, particularly health care;
- Building capacity of health service providers in rural and urban areas;
- Increasing the number of health centres, facilities and staff in rural areas.

### *Education and training*

- Encourage private sector and individuals to invest in education development;
- Increase annual intakes of students joining higher learning institutions;
- Rehabilitation and construction of schools (including houses for teachers);
- Strengthening capacity building programs for teachers;
- Strengthening school committees and inspection.

### *Uganda*

The National Report outlines a set of sub-visions (“desired futures”) for poverty alleviation, health, social services and education as well as training.

#### *Poverty Alleviation*

- Increased household incomes
- Fair taxation and affordable interest rates
- Accessible revenue collection centres
- Insurance policies for farming as a business
- Access to credit

#### *Health and social services*

- All maternal deliveries handled by qualified health workers.
- Adequate referral system in place
- Reduced mortality and morbidity rates – higher life expectancy
- Proper sanitation at household level

#### *Education and training*

- Schools with facilities for special needs education
- Increased access to education by disadvantaged children such as orphans
- High educational standards in rural schools

- More girl children retained in schools

To address this the following priority strategies are suggested:

- Revision of taxation policies through consultation and participation with grassroots people;
- Establish revenue collection centres in the islands;
- Promote establishment of micro finance institutions and regulate their operations;
- Formulate policies that promote agricultural enterprises;
- Sensitisation of people and provision of ambulances and communication equipment;
- Nutrition awareness;
- Establishment and regulation of micro finance institutions;
- Improved childcare and parental support;
- Investments in quality education.

#### 5.4.2. Regional Vision and Strategies

Regional discussions lead to the following vision for the policy area:

#### **Box 25: The Regional Vision for “Living Conditions and Quality of Life”**

The Regional Vision for “Living Conditions and Quality of Life”:

“A healthy, well educated society with high quality of life, well developed infrastructure and free from poverty”

#### *Strategies*

The following set of strategies was indicated at the regional discussions for some of the issues falling under this policy area:

- *Education*  
Establish co-ordinated national campaigns to build schools in urban and rural areas  
Focus existing programs to improve the situation of women and youths
- *Health*  
Intensify and co-ordinate (regionally) major health campaigns (HIV/AIDS and malaria)
- *Infrastructure*  
Develop road network and new/alternative sources of energy

Suggested strategies and related indicators at the regional discussions are shown in the table (Box 26). Further prioritising of strategies and indicators is presented in chapter 6.

**Box 26: Suggested strategies and indicators for living conditions and quality of life.**

Sector	Indicators
<p><b>Vulnerability and poverty alleviation</b> Restore family values. Promote positive cultural values in the family and community.</p> <p>Develop efficient gender roles for men and women</p> <p>Establish and institutionalise relevant education and training (vocational training) for young men and women for gainful employment. Promote value and dignity of work among the youth.</p> <p>Develop and implement programs to reduce income and food poverty among the youth.</p> <p>Creating, promoting and strengthening credit provision in both rural and urban areas. Improving productivity of small-scale farmers/fishermen, and post harvest storage. Economic policy favouring the informal sector. Revive cooperative societies to access loans.</p> <p>Increase productivity, profitability and improving services for agriculture and livestock. Improve post harvest handling through agro-processing in rural areas. Promote private sector participation with particular focus on local initiative. Minimize vulnerability to rainfall variability by increasing investment in smallholder irrigation, commercialisation of agriculture and livestock.</p> <p>Strengthen and enforce laws on development of settlement structures. Enforce construction and use of sanitation services/facilities. Proper land use planning. Design and implement low-cost housing programs.</p> <p>Increase employment opportunities Develop and extend infrastructure to minimize rural-urban migration</p> <p>Build capacity of the community to participate in maintenance of law and order. Provide security surveillance in the lake</p>	<p>Amount of involvement by family and community in production and development activities. Numbers of forums at village, community and regional levels increased. Gender representation increased, and equitable access to and control of available resources.</p> <p>Number of youth and disadvantaged with gainful skills and employments increased. Number of youths trained Number of people trained and employed increased.</p> <p>Size of household incomes, percentage of people employed, Production in agriculture, livestock and fisheries.</p> <p>Number of people receiving credit increased</p> <p>Household food security Amount of diversified and modernised agricultural and livestock systems</p> <p>Improved planning of infrastructure in urban and rural areas and human settlements</p> <p>Engagement in economic activities Amount of equitable opportunities to employment</p> <p>Incidences of insecurity Amount of joint and coordinated security mechanism put in place</p>

<p><b>Health services</b></p> <p><i>HIV/AIDS:</i> Strengthen awareness campaigns, sensitisation and capacity building on HIV/AIDS to communities</p> <p>Nutritional awareness and proper feeding</p> <p>Strengthen health programs targeting HIV/AIDS. Institutionalise testing and counselling. Provision of support for affected and infected</p> <p><i>Preventive health:</i> Sensitisation and health education campaigns on disease prevention, immunization, HIV/AIDS, STDs, reproductive health. Provision of affordable and accessible quality health care Education programs on preventive health care. Maternal deliveries handled by qualified health workers Review and enforce public health laws.</p> <p>Sensitisation of community to contribute towards health infrastructure and services Promote private sector participation in provision of health services Increase number of health facilities and trained staff, esp. in rural areas. Strengthen institutional capacity to implement health sector programs, including capacity building of health services providers in rural and urban areas. Provide adequate medical equipment and drugs. Provide adequate referral system and facilities.</p>	<p>Amount of community participation in combating HIV/AIDS. AIDS prevalence/reduction of AIDS cases. Access to health services for victims. Health care mechanisms in place. Practices that promote AIDS discarded.</p> <p>Level of deceases prevalence</p> <p>Reported infant mortality rate</p> <p>Doctor/nurse ratio Bed/patient ratio</p>
<p><b>Education and training</b></p> <p>Mobilise private investment in education. Promote vocational training institutions for skills development. Enforce functional literacy education, and promote collective responsibility in education. Rehabilitation and construction of schools, leading to increasing intake of students joining higher education. Develop relevant curricula, harmonized curricula for the EAC countries. Increase education focusing on equity, affordability and quality. Enforce girl child education.</p>	<p>Number of training institutions and student enrolment</p> <p>Percentage of qualified people taking up employment</p>
<p><b>Water supply and sanitation</b></p> <p>Campaigns against pollution of water sources to avoid contamination Provision of sanitation and hygiene education</p>	<p>Level of (waterborne) deceases</p>



<p>Management of domestic and industrial waste disposal. Build capacity of the community to plan, construct and manage their water supplies. Decentralise information, dissemination and increase service coverage. Govt/Donor and beneficiary contributions for rural water supply schemes. Beneficiaries to meet O&amp;M costs Assessment and mapping the resource for urban and rural water supply Revision of policy on rural and urban water supply.</p> <p>Private Sector involvement in development and management of urban water supply and sewerage services. Govt/Donors to develop infrastructure and water sources.</p>	<p>Coverage of water supply and sanitation in rural and urban areas (% of house served / connected to sewer)</p>
<p><b>Infrastructure</b> Formulate policies that will provide incentives for investments in roads. Encourage community participation in feeder road construction and maintenance. Mapping of water transport routes and improvement of harbours. Participatory project planning and implementation. Increase in Government and donor support to facilitate coverage of services. Promote private sector investment in provision of telecommunication services in rural areas, lake water transportation.</p> <p>Investment in rehabilitation and maintenance</p> <p>Improve management of network system and services</p>	

## 5.5. Policy Area 4: Population and Demography

### 5.5.1. National visions and strategies

#### Kenya

Except for a strong emphasis on gender equity in relation to production and reproduction, population policies are not explicitly addressed in the Kenyan National Report. The pressure on natural resources and public services from high population growth and the devastating, long-term effects of HIV/AIDS on life expectancy and the productive segment of the population, are described as fundamental challenges. However, except for a reference to lack of advocacy and education on family planning and poor adoption of birth control methods there is no reference to specific policies or *population strategies* to meet these challenges.

### *Tanzania*

The Tanzanian vision for this policy states:

*“A Lake Victoria Basin experiencing improved quality of life of local communities through sustainable use of basin resources while ensuring that economic growth rate is above population growth rate”*

As for strategies to meet the vision, the National Report points to the general need to sensitise the public on the interaction between population growth, natural resources utilisation, and socio-economic development and poverty reduction. To this effect the following strategies are suggested:

- Integration of population issues in development planning including evaluating the current use of available natural resources with the aim of establishing an appropriate system of distributing resources;
- Improve and sustain the health and well being of mothers and children and encouraging the private sector and local communities to initiate, implement and finance population programs;
- Encourage investments in the rural sector which provide employment opportunities for the rural population, e.g. improving productivity of small-scale farmers, fishermen and industries and promoting non-agricultural production;
- Establishing contingency plans and increased preparedness for the handling of refugees.

### *Uganda*

During the Ugandan vision process the population issues were most clearly related to the pressure of population growth on natural resources and the lack of public awareness in this context. Negative attitudes towards family planning and the effects of uncontrolled immigration, internal strife and resettlements are also mentioned. The overarching vision, although not explicitly stated, is to have:

*“A well managed and planned population in a stable nation”*

The National Report suggests that strategies should be formulated to:

- Offer reproductive health services and encourage family planning and child spacing practices;
- Restrict immigration and counteract on the effects of internal and external wars;
- Discourage polygamy and enforce laws on defilement;
- Sensitise the community on child rights and implement child rights statute and human rights.

#### *5.5.2. Regional vision and strategies*

Regional level discussions concluded on the following vision for “Population and Demography”:

### Box 27: The Regional Vision for “Population and Demography”

The Regional Vision for “Population and Demography”:

“A healthy, competent and productive population able to utilise and manage natural resources sustainably to achieve economic growth and development”.

#### Strategies

Regional level discussions focused on the rapid population growth in the Lake basin and the need to slow the growth rate as well as rural-urban migration and the problems resulting from the influx of refugees in certain areas. Also the loss of productive members of the population due to the effects of HIV/AIDS was highlighted.

The suggested strategies and related indicators are shown in Box 28. As for the other policy areas the scope and direction of strategies and indicators is wide. Therefore a set of strategies and indicators is prioritised and further analysed in chapter 6.

### Box 28: Suggested strategies and indicators for Population and Demography.

<b>Sector</b>	<b>Indicators</b>
<p><b>Reduced Population Growth Rate:</b> Vigorous support for Family planning and Reproductive Health programmes and services for both men and women.</p> <p>Improving educational opportunities for all children and particularly the girls.</p> <p>Information, education and communication campaigns aimed at sensitising the communities and policy makers on the interrelationship between population, environment and sustainable development.</p> <p>Integration of population issues in development planning.</p> <p>Encourage private sector involvement in initiating, implementing and financing population programmes and activities.</p> <p>Sensitise people on celebrated cultural values</p>	<p>Rate of total population growth.</p> <p>Number of girls at all levels of education.</p> <p>Number of private sector organisations involved in population programmes and activities.</p>
<p><b>Change cultural and social behaviours and practices</b> Intensify Information, Education and Communication</p> <p>Campaigns and programmes to sensitise communities on the causes and implications of HIV/AIDS and STIs.</p>	<p>HIV/AIDS incidence and prevalence.</p> <p>(Raised) Public awareness.</p> <p>Support mechanisms in place.</p>

<p>Provision of support mechanisms for those infected and affected by HIV/AIDS.</p> <p>Promote and institutionalise HIV testing and counselling</p> <p>Criminalize retrogressive gender based cultural practices and behaviours, which promote spread of HIV/AIDS (e.g. wife inheritance, circumcision).</p> <p>Initiate and strengthen HIV/AIDS Interventions and programmes that specifically target the transient communities-fishermen and long distance truck drivers.</p>	<p>Number of people going for HIV tests. No. of centres, institutions offering HIV/Testing and counselling. Amount of change in behaviours and practice.</p> <p>Number of programmes and interventions.</p>
<p><b>Reduce mortality and morbidity</b> Improvement of health care infrastructure. Provision of adequate medical equipment, drugs and skilled personnel.</p> <p>Provision of affordable and accessible quality health care.</p> <p>Sensitisation and health education campaigns on disease prevention and immunization.</p>	<p>No. and quality of health facilities in place. Increased number of skilled medical personnel. Distance from nearest health facility. Availability of drugs.</p> <p>Cost of medical care</p> <p>Infant mortality rate Maternal mortality ratio</p>
<p><b>Control migration and immigration</b> Improve economic and employment opportunities in the rural areas.</p> <p>Provide entrepreneurial and vocational skills for rural and fisher folk</p> <p>Develop and promote indigenous talent and skills Resettlement and rehabilitation of refugees Establish disaster preparedness plan for handling refugees and internally displaced persons.</p> <p>Establish and strengthen mechanisms of mutual security and conflict resolution Resettlement and rehabilitation of children (shift to quality of life-vulnerable groups)</p>	<p>Rate of urban-rural migration</p> <p>Number of persons with entrepreneurial skills in rural areas.</p> <p>Plans or policies in place</p> <p>Number of street children</p>
<p><b>Reduce water and roads accidents</b> Improve road networks Improvement of water transport and navigation and increased investment in water transport (vessels, navigation etc.)</p> <p>Regulate over loading on water vessels Training on navigation and use of GIS systems Licensing of water vessels and ensuring availability and use of life jackets</p> <p>Set up regional policies on water and road transport Regional policy on licensing of vehicles, water</p>	<p>Length of road network Number of accidents on water and road Amount of well maintained and modern vessels in place</p> <p>Increased number of trained and certified navigators Increased number of properly licensed vehicles and vessels Increased use of life jackets on water</p> <p>Number of regulations harmonized and</p>

vessels and issuing of driving permits. Effective implementation of road and traffic regulations	implemented in the three countries
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## **5.6. Policy Area 5: Governance, Institutions and Policies**

### *5.6.1. National visions and strategies*

#### *Kenya*

The Kenyan National report focuses on two major goals (sub-visions) addressing issues of governance and conflict resolution:

*“A community where law and order are upheld and where the community feels safe; and in relation to inter-territorial policies;  
Policies that encompass, respect and vibrant trade relations within and among riparian states and other beneficiaries of the Lake Victoria waters.”*

Suggested strategies cover a wide range of governance issues connected to strategies proposed under the various policy areas. Measures to support proposed strategies to act on environmental problems and promote more effective and co-ordinated natural resource management are listed in great detail. The report is, with regard to health and education, quite explicit in pointing at what is needed at the *national* level to address the challenges and to initiate change. To summarise, the NTF suggests the following areas for policy development.

#### *Environmental protection and resource management*

Issues relating to under-utilisation of resources (water, minerals, wildlife and tourism potential, production of energy) should receive government attention at both institutional and policy level. As a matter of priority the government should deal with food insecurity caused by regulations on fishing, the fishing environment and utilisation of land resources and quality of livestock.

#### *Social-economic development policies*

A regional policy framework is required to address development issues across the riparian countries. There is also need for a review of public health laws and policies with greater degree of community participation supported by campaigns on preventive health care.

#### *Decentralisation and good governance*

In light of the vulnerability of local communities policies are needed that outline joint responsibility between Government and the people as well as issues of good governance and institutional set-up. Law enforcement and penalty measures are needed to come down harder on corruption.

#### *Conflict resolution*

It is a need to create a joint regional policy framework that protects the people and the resources of the whole lake basin. Laws and international treaties such as the Nile Treaty government should be re-negotiated to contribute to the well being of the people of the region.



### *Tanzania*

The Tanzanian National report states the following governance vision:

*“A prosperous community that observes the rule of law, that is well integrated with institutional framework and supported by an enabling policy environment developed from the grassroots”*

The following sets of strategies are suggested:

#### *Decentralisation, participation and good governance*

- Local Government institutions should be strengthened to provide the people with opportunities for influencing their own development in addition to awareness raising campaigns on local resources ownership and control;
- Promoting and improving effective participation and involvement from people and civil society organisations in decision making and social, political and economic development activities;
- Strengthening procedures and regulations which ensure transparency in the conduct of official affairs through adherence to requirement of open and transparent reporting of administrative decisions;
- Establishing and strengthening appropriate anti-corruption measures.

#### *Human rights development*

- Explicit recognition, implementation and institutionalisation by the Government of international obligations on human rights instruments;
- Educating the public on constitutional and human rights as well as supporting and strengthening human rights organizations to promote and raise awareness on human rights among the general public;
- Violation of human rights should be investigated and appropriate remedial action taken.

#### *Law enforcement and security*

- Strengthening the capacity of the police to lawfully ensure the security of the persons and property as well as respect for human rights;
- Strengthening the capacity of the judiciary to administer law and justice with fairness and efficiency both at local and central Government level and to protect human rights;
- Strengthening of security surveillance around the basin.

### *Uganda*

The National Report focuses on three elements of governance for a desired future:

- Increased decentralisation and participation
- Effective bottom up processes and improved cooperation between public and private sector and civil society
- Improved implementation and enforcement of laws

Suggested strategies fall in two groups of interrelated policy measures:

### *Decentralisation and participation*

- The legislation for revenue sharing between the national and local governments needs reviewing and update to stop local authorities encouraging enterprises with negative effect on the environment;
- Community based participatory planning and budgeting, also including NGOs, should be promoted.

### *Harmonisation of laws and regulations*

- There is a need to review current national and regional laws and regulations to assess their relevance and adequacy. Communities and local authorities should be sensitised to issue and enact appropriate bylaws;
- Present contradicting regulations in the three countries hampering sustainable management and control of fish resources in the lake should be harmonised;
- Some standing cooperation protocols are from pre independence e.g. the Nile Treaty regulating water outflows into the Nile. Criminal law should be harmonised to avoid a situation where crime committed in one country finds sanctuary in the other.

### *5.6.2. Regional vision and strategies*

The regional discussions concluded on the following vision for the policy area also including the aspects of gender equality:

### **Box 29: The Regional Vision for “Governance, Institutions and Policies”**

The Regional Vision for “Governance, Institutions and Policies”:

“An empowered and gender sensitive community that observes the rule of law and human rights, well integrated institutional framework enabled by a policy environment that facilitates their involvement in the management of resources”.

### *Strategies*

The regional discussions recognized the need to address issues of good governance and conflict resolution. Corruption, lack of transparency and public participation has been particularly focused. Strategies suggested were:

### *Decentralisation*

- Decentralisation of financial resources and revenue-generation authority from central government to local authorities;
- Creation of systems of effective decentralised resource accountability;
- Development of programs for increased local participation in public decision-making.

### Administrative effectiveness

- Improve administrative effectiveness by reducing the number of civil servants and initiating programs for human resource development (training);
- Increase salaries to reduce the incentive for corruption.

### Conflict resolution and inter-government co-ordination

- Develop systems and mechanisms for co-operation and conflict resolution at intergovernmental as well as at national (central-local) level.

Through the regional discussions a set of suggested strategies and indicators was defined (Box 30). As for the other policy areas they are numerous and wide and has therefore been further prioritised in chapter 6.

### Box 30: Suggested strategies and indicators on Governance, Institutions and Policies

<b>Sector</b>	<b>Indicators</b>
<p><b>Good governance and human rights</b>                      Improve administrative effectiveness:                      Establish and strengthen appropriate anti-corruption measures                      Increase pay of civil servants                      Improve human resources capability                      Downsize public sector</p> <p>Strengthen procedures and regulations that ensure transparency/openness,                      Develop decentralization programs to promote participation in decision making                      Promote inter-governmental coordination</p> <p>Impart civic education to local communities and law enforcement authorities                      Create awareness to the public on constitutional and human rights and institutionalise the respect for human rights</p>	<p>Amount of corruption incidences                      Number of law enforcement units closer to the local communities</p> <p>Collective development planning amongst NGOs/Civil Society Organizations and Governments</p> <p>Human rights issues addressed on daily basis.                      (Amount of increase) in awareness on rights and responsibilities.</p>
<p><b>Harmonisation of laws and policies</b>                      Formulate policies that address issues of sustainable development and poverty eradication.                      Revise, amend and harmonize existing policies and existing obsolete laws                      Strengthen research and rural-based simple technologies geared to simplify the work of women.                      Promote equal opportunities for enterprises and investments</p>	<p>Policies reviewed, laws amended and agreements re-negotiated</p>
<p><b>Decentralisation and devolution</b>                      Streamline guidelines for resource mobilisation                      Study and update existing laws in respect of financial decentralization                      Educate public on constitutional and human rights                      Restore family values, promote the value and</p>	<p>Enabling laws that provide for decentralisation.</p>

<p>dignity of work; education and training for the youth for gainful employment Promote grassroot functional (adult) literacy programs Create opportunities for wealth creation through appropriate policies</p>	
<p><b>Law enforcement and security</b> Strengthen the capacity of the judiciary to administer law and justice with fairness and efficiency and to protect human rights both at local and central level Awareness creation, education and training  Formulate and implement security measures on the lake Agree and implement anti cattle rustling plans</p>	
<p><b>Conflict resolution and management</b> Comprehensive water resources assessment in partner states Coordinated patrols on lake Link with Safety of Navigation Project.  Improve system for conflict resolution. Institute mechanisms for conflict resolution. Awareness campaigns on local resource ownership and control</p>	<p>Amount of water resources assessment reports and plans  Amount of joint plans and agreements  (Amount of increase in increase of) awareness on resource ownership.</p>
<p><b>Institutional framework, capacity and competence</b> Strengthen capacity of existing institutions such as local government, judicial instruments, cultural institutions and communities Analyse the situation and develop capacity building programs Strengthen local government institutions to actively involve people in their own development planning Promoting civil society organizations' participation in decision making related to their development  Strengthen consultation processes with communities in planning</p>	<p>Strengthened and functioning institutions.  Planning coordinated and carried out by (involved) key stakeholders. Realistic, implementable and sustainable development plans generated from grassroots communities Number of local communities and CSOs participating in development planning</p>

## 5.7. Gender aspects of visions and strategies

### 5.7.1. National visions and strategies

#### Kenya

Gender issues are highlighted throughout the Kenyan National Report cutting across all policy areas as well as being an important policy area in its own capacity. Gender issues are related to most aspects of economic and social life as well as deeply rooted in customary and cultural norms and practices. Somewhat edited the national vision says:

*“Gender equity and affirmative action in relation to productive and reproductive roles and sharing of accruing benefits.”*

The primary strategies (under various policy areas) are:

- Readdress lost value systems in relation to gender and promote gender equality by mainstreaming gender concerns in all sectors of governance and development and promote gender specific policies and laws to protect vulnerable groups;
- Improve women’s access to and control of factors and means of production.
- Promote dialogue on human rights and gender equity in resource utilisation and the sharing of benefits;
- Formulate and enforce progressive and more equitable succession and inheritance laws;
- Increase women’s capacity and competence through civic education with emphasis on participation and leadership;
- Improve girls’ access to education;
- Criminalise gender based retrogressive cultural practices and behaviours, especially related to genital mutilation, funeral rites and the spread of HIV/AIDS.

#### *Tanzania*

The NTF notes that gender issues have played a key role as a base for marginalisation and exclusion and are still persistent regardless of enabling laws and regulations, mostly due to cultural and religious attitudes and practices. In the national context there is a recognition that women in the country have been left behind because of the historical imbalances related to, among others, unequal access to resources and rights. This forms the background for the national gender vision:

*“A community with equal participation in decision making and access to resources, ownership and control”*

Strategies to achieve this include:

- Strengthening of households through provision of training, legal literacy knowledge and skills, civic education and democracy;
- Mainstreaming gender in all activities;
- Responding to and meeting the needs of special groups of women, children and youth in order to reduce their workload;
- Strengthen household income generating projects;
- Empowering women in decision-making and politics and promote active participation of women in socio-political activities, particularly at grassroots level.

#### *Uganda*

The Ugandan NTF concludes that gender (and youth) issues are inadequately targeted in development programmes and that communities in general are not gender sensitive. The vision is to have such programs in place and implemented.

The main strategy is mainstreaming gender in all development programmes and activities. More specifically strategies should:

- Increase community sensitisation on gender issues;
- Discourage polygamy and enforce laws on sexual defilement and abuse.

### 5.7.2. Regional vision and strategies

As cited above the Regional Vision for Governance, Policies and Institutions also contains a reference to gender sensitivity in all policy areas.

#### Strategies

Through the regional discussions the following gender strategies were suggested

### Box 31: Suggested strategies and indicators on gender

<b>Sector</b>	<b>Indicators</b>
<p><b>Changing gender roles and relations</b> Re-address lost value systems in relation to Gender.</p> <p>Promote positive gender relations through shared gender roles for sustainable family and community development.</p> <p>Capacity building through civic education with emphasis on participation in leadership.</p> <p>Promote dialogue on human rights and gender equity in resource utilization and sharing benefits.</p>	<p>(Amount of) raised positive awareness of gender roles in the family and community</p> <p>Gender representation in leadership and decision making</p> <p>(Amount of) equitable access to and control of resources and benefits at all levels</p>

### 5.8. National Visions

The three national visions for the Lake Victoria Basin, as formulated at the national workshops, are phrased differently, but encapsulate some common, shared principles and values. The three national visions (see box 32) all express that future development in the lake basin will have to take into consideration the closely interlinked dimensions of:

- Economic development as a basis for prosperous populations and improved livelihoods;
- Sustainable use of the natural resource base;
- Protection of the environment.

These dimensions are all fundamental to capture the core values of sustainable development: poverty alleviation, quality of life and environmental protection.



### Box 32 National Visions for the future of Lake Victoria Basin

Kenya:

“A lake basin community enjoying a sustained natural resource base within a well conserved environment providing foundation for economic vibrancy that improves their livelihoods and increases opportunity for full realization of their potential”.

Tanzania:

“ A Basin with the resources sustainably managed and communities having high standards of living

Uganda:

“A Lake Victoria Basin which is well planned and managed providing sustainable benefits, with a prosperous population meeting their development needs without depleting the natural resources and degrading the environment”

The general characteristics of the national processes leading up to the formulation national visions are described in chapter 1. The following paragraphs go into more detail – although cursorily – on these processes and general observations on the harmonisation process.

#### *5.8.1. Values and visions expressed by different stakeholders*

A general observation is that the focus of the vision process and the visions and priorities expressed differed somewhat between the various levels engaged in the processes. At local community level issues of poverty was highly focused whereas when scaling the process up to district and national levels more focus was directed towards resource utilisation and economic growth. At community level the need to strengthen individual skills was seen as an important driving force to enhance social change. Local communities have the opinion that they are more able than national institutions to utilise and manage natural resources, such as water bodies, forests and wetlands, to secure their own livelihoods and prosperity.

At district level focus was switched towards need for more participatory planning and implementation systems, increased public revenues generated locally or shared with central government, and the enforcement of existing legal provisions in support of environment protection and management.

As a general observation, sector representatives consulted in the process seemed primarily attentive to future development issues and bottlenecks related to their own sector. Sector visions were in general confined to the specific values, concerns and problems of that particular sector. Also a regional body like LVEMP conveyed a vision statement closely related to their own development program.

At national level, we observed opinions stressing the needs to create space for a wider participation in policy formulation by different actors and stakeholders as well as improved cooperation between civil society, private sector and government in the management of the water and natural resources in the basin. Also questions of how to attract more investment in the region and the need for harmonisation of laws and regulations within the country and the region were raised.

For the individual national processes the following observations were made.

- In *Kenya* stakeholders identified that the environment and ecology of the Lake Victoria Basin are under continuous threat from various fronts. Furthermore they recognised that the Lake Victoria region faces great poverty largely due to little recognition of gender disparities in nature resources based production and conservation. Stakeholders also pointed to the fact that many actors, that need to be co-ordinated, were involved in the development, organisation and implementation of policies for management of natural resources in the lake basin. Traditional knowledge, culture and norms in environmental conservation and management need to be streamlined and local communities need to be institutionally strengthened and more involved in policy formulation and implementation.
- In *Tanzania* the vision building process strived to level the understanding and expectations of all stakeholders at central and local government levels, the private sector and civil society organizations. Underlying principles of the process were the aim to establish people centered and private sector driven economic growth, effective cooperation between stakeholders, sustainable development and poverty alleviation, social justice and equity. The process also focused on broad participation, true inclusion and dialogue in stakeholder consultations, being particularly attentive to gender considerations and responsiveness.
- In *Uganda* stakeholders at community, district and national levels underscored the centrality of human resource development; improvement of quality of life and the need to effect transfer of task and responsibilities to lower levels in order to move towards the future envisioned. Stakeholders recognised the immense potential of the Lake Victoria Basin but were also concerned about the gross abuse of resources and the ensuing repercussions if present negative trends are not arrested. Necessary changes in attitudes and behavior relate both to individuals, specific interest groups as well as government and non government institutions. Skills will have to be developed along with procedures for participatory planning and policy formulation, increased collaboration between civil society, the private sector and government. Laws and policies should be reformed and extended to the regional level, harmonised and equitably enforced.

### **5.9. The Regional Vision**

The regional vision for Lake Victoria Basin builds on the national visions and a thoroughly examination and evaluation of the national reports. A full set of harmonisation matrixes was developed for all policy areas based on the threats and challenges priorities and strategies suggested in the country reports. The regional vision includes all dimensions inherent in the national visions but at the same time it is formulated in a way that distinguish the regional vision from those of the three partner states.

#### **Box 33 The Regional Vision for the Lake Victoria Basin**

The Regional Vision for the Lake Victoria Basin:

“A prosperous population living in a healthy and sustainably managed environment providing equitable opportunities and benefits.”

## 6. PRIORITY SETTING AND STRATEGIC FRAMEWORK

This chapter attempts to give substantive content to the Strategy Framework model outlined in Chapter 1, based on the overall Regional Vision and the Policy Area Visions developed for each of the five policy areas outlined in Chapter 5. As has been emphasised in Chapter 1, the scope of the Vision and Strategy Framework Project has not been to deliver a set of fully developed strategies. From an initial focus on vision development only, it was decided to extend the scope to also include the development of a *Strategy Framework*, i.e. a model for further and continued work on strategies and policy development.

Therefore, what is presented in this chapter is not a set of strategies and action plans ready for implementation. Rather, the aim is to outline the main *directions* for continued efforts to further develop and upgrade this framework into a set of sustainable development strategies for the lake basin.

To start this work, some choices must be made to decide *where and with what to start*. The intention of the Strategy Framework is to indicate these starting points and the directions for further work on detailed strategies and action programs. This means to indicate – and decide on – priorities needed to concentrate work on the most crucial areas to meet the visions, i.e. attacking those issues and problem areas most crucial for improving the ecological status of the lake basin and the living conditions and quality of life for its people, by – at the same time – exploiting the vast resources of the lake basin in a sustainable and equitable manner.

The starting point for this exercise is the inputs from the national processes and the subsequent considerations of these inputs at regional level. A vast material lies at the bottom of this process. The major task – difficult, but challenging – is to make the necessary decisions give focus to this process and to single out the most critical issues that should be the object of further strategy development.

### 6.1. The need to focus and set priorities

To move towards the fulfilment of the shared Lake basin Vision, strategies and action plans must be as comprehensive and encompassing as the overall Vision and the sub-visions derived from it. This has called for a process of setting priorities. Therefore a composition of a limited number of high priority ‘strategy packages’ with a primary aim to address those major problems and options that span *all or most of* the five policy areas is presented in chapter 6.2.

As is observed from the previous chapter a great many of the proposed action strategies are of a very general nature with a very broad scope. Just a few of them can be regarded as being *operational* in the sense that they can be the basis of concrete plans for action. Therefore, at regional level prioritisation of the strategies and indicators described in chapter 5 were undertaken. The prioritisation is based on ranking exercises and a further participatory expert judgement on which strategies and indicators to prioritise. The methodology for selecting and elaborate indicators is described in chapter 2.4.

There are *pro et con* arguments for setting priorities. In the end, this is a political process and not the task of a consultant or a group of experts. On the other hand, in a situation of enormous challenges and scarce resources one will have to employ the resources where they give the best return in terms of meeting the expectations laid down in the vision. Here, experts can give advice and suggestions how to design a good *mix* of strategies – ‘action packages’ – that cut across policy areas and sectors.

## **6.2. Prioritised Strategies and Indicators**

The following set of boxes (34-38) is the prioritised set of strategies and indicators as a result of the ranking procedure and the following expert judgement of the RTF and IC. Focus has been on making the strategies and indicators more operationalised and to exclude any overlaps between the policy areas. Some strategies described in specific policy areas in chapter 5 have therefore been moved to *new* policy areas to streamline the prioritised packages.

**Box 34 Prioritised Strategies for Policy Area 1 - Ecosystems, Natural Resources and Environment**

<b>Sector Strategies</b>	<b>Indicators</b>
<p><b>1 Fish resources management</b></p> <ul style="list-style-type: none"> <li>• Promote sustainable fisheries policies, baseline surveys, extension services, monitoring, surveillance and control measures</li> </ul>	<p>Maintained fisheries yield at an estimated long-term level Reduced numbers of licences and quotas</p>
<p><b>2 Land use and natural resources management</b></p> <ul style="list-style-type: none"> <li>• Improve land use and natural resources planning with particular focus on urban expansion</li> <li>• Promote proper land use management practices</li> <li>• Promote co-management of wildlife</li> <li>• Conduct wildlife inventories</li> <li>• Promote the establishment of community forests and woodlots/afforestation/tree planting schemes/agroforestry</li> </ul>	<p>Decrease in encroachment into vulnerable areas. Improved land cover Number of approved land-use plans in place  Number of wildlife co-management areas established Increase in wildlife inventories Forest cover/number of trees</p>
<p><b>3 Water resources management</b></p> <ul style="list-style-type: none"> <li>• Promote integrated water resource/water catchment management</li> <li>• Promote water quality and quantity monitoring</li> <li>• Intensify water weed monitoring and control</li> </ul>	<p>Reduced sediment loading into the lake  Improved water quality  Reduced density of weeds</p>
<p><b>4 Pollution control and waste management</b></p> <ul style="list-style-type: none"> <li>• Integrated waste management of solid wastes and discharges into the lake</li> <li>• Reduce point source pollution by strengthening industrial and municipal waste management in urban and industrial centres</li> <li>• Promote regulations to reduce and control pollution from mines</li> <li>• Promote farming methods that reduce use of pesticides, herbicides and fertilizer</li> </ul>	<p>Reduced area of lake experiencing anoxia at any depth  Increased tonnage of human and animal waste properly disposed and treated</p>



### Box 35 Prioritised Strategies for Policy Area 2 - Production and Income Generation

<b>Cross-cutting Strategies</b>	<b>Indicators</b>
<b>1 Improve infrastructure</b> <ul style="list-style-type: none"> <li>Enhance and maintain road, water transport, communication and energy network</li> <li>Mobilize diversified funding and management of infrastructure, i.e. encourage government, private sector and community partnerships</li> <li>Encourage energy efficiency and use of alternative sources of energy</li> <li>Improve safety of navigation</li> </ul>	Increase in annual investment in infrastructure development (by type)
<b>2 Improve institutional, regulatory framework and capacity</b> <ul style="list-style-type: none"> <li>Encourage efficient and cost effective utilisation of natural resources in the region</li> <li>Improve marketing systems and inculcate business culture</li> </ul>	Increase in number of paid work positions exceeding poverty rate
<b>3 HIV/Aids</b> <ul style="list-style-type: none"> <li>Implement strategy to fight HIV/AIDS impact on production and productivity, as the majority of those affected are productively active members of the society</li> </ul>	HIV prevalence in the productive age group AIDS sick/dead in the productive age group
<b>Sector Strategies</b>	
<b>1 Promote exploitation of resources potential</b> <ul style="list-style-type: none"> <li>Promote exploration and exploitation of mineral and other resource potential</li> <li>Use environmentally sound technologies</li> <li>Ensure that proceeds trickle back to the region for development</li> <li>Encourage eco-tourism among locals and foreigners</li> </ul>	Increase in number of new industrial and mining establishments/investments
<b>2 Improve research and development facilities</b> <ul style="list-style-type: none"> <li>Reduce dependence on seasonal rains</li> <li>Increase soil fertility</li> <li>Reduce post harvest losses</li> <li>Introduce more appropriate technologies in farming and fisheries</li> </ul>	Increase in number of specialists assisting local people and communities (extension services)
<b>3 Improve access to natural resources</b> <ul style="list-style-type: none"> <li>Ensure equal opportunity for all in accessing natural resources</li> <li>Support women participation in fishing and mining</li> <li>Check unfair competition and excesses of middlemen</li> <li>Encourage value addition by processing at source</li> </ul>	Number of women in fishing and mining

### Box 36 Prioritised Strategies for Policy Area 3 - Living Conditions and Quality of Life

<b>Cross-cutting Strategy</b>	<b>Indicators</b>
<p><b>Vulnerability and poverty alleviation</b></p> <ul style="list-style-type: none"> <li>• Develop and implement programs to alleviate poverty and increase employment opportunities Inter alia by                             <ul style="list-style-type: none"> <li>○ integrating environmental issues into poverty reduction interventions</li> <li>○ establishing economic policies favouring the informal sector.</li> <li>○ creating, promoting and strengthening credit provision</li> <li>○ designing and implementing low-cost housing programs.</li> <li>○ improving productivity of small-scale farmers/ fishermen, and reducing post harvest losses</li> </ul> </li> <li>• Minimise vulnerability to rainfall variability by increasing investment in smallholder irrigation, commercialisation of agriculture and livestock and mitigating floods</li> </ul>	<p>Increase in number of people with earnings above poverty level</p> <p>Decrease in number of communities without adequate food sources and storage capacity</p>
<b>Sector Strategies</b>	<b>Indicators</b>
<p><b>1 Water supply and sanitation</b></p> <ul style="list-style-type: none"> <li>• Support community participation in planning, construction and management of their water supplies</li> <li>• Improve safe water supply coverage in rural and urban areas</li> <li>• Support campaigns to protect water sources from contamination</li> <li>• Enforce construction and use of sanitation services/facilities</li> </ul>	<p>Increase in number of communities with safe and clean water</p> <p>Increase in number of communities with proper sanitation</p>
<p><b>2 Health services</b></p> <ul style="list-style-type: none"> <li>• Strengthen health programs targeting HIV/AIDS                             <ul style="list-style-type: none"> <li>○ institutionalise testing and counselling</li> <li>○ provision of support for affected and infected</li> <li>○ strengthen awareness campaigns, sensitisation and capacity building on HIV/AIDS to communities</li> </ul> </li> <li>• Strengthen health programs targeting malaria and communicable diseases                             <ul style="list-style-type: none"> <li>○ education programs on preventive health care</li> <li>○ sensitisation and health education campaigns on disease prevention, immunisation</li> <li>○ increase access to safe water</li> </ul> </li> </ul>	<p>Increased number of communities with acceptable participation in HIV/AIDS programs</p> <p>Increased number of communities with access to acceptable health care</p> <p>Decrease in infant mortality rate</p> <p>Improved nutritional status of households</p>

<ul style="list-style-type: none"> <li>• Develop policies to improve nutritional standards</li> <li>• Provide affordable and accessible quality health care, facilities and trained staff, especially in rural areas</li> </ul>	
<p><b>3 Education and training</b></p> <ul style="list-style-type: none"> <li>• Rehabilitation and construction of new schools</li> <li>• Promoting private investments in education</li> <li>• Promoting vocational training institutions and skills development with particular emphasis on young people</li> <li>• Promoting adult literacy programs</li> <li>• Promoting and supporting girl – child education</li> </ul>	<p>Increase in number of communities with full education capacity for all young people</p>
<p><b>4 Infrastructure</b></p> <ul style="list-style-type: none"> <li>• Encourage community participation in rural feeder road construction and maintenance</li> <li>• Promoting private sector investment in provision of telecommunication and internet services</li> <li>• Promoting alternative sources of energy</li> </ul>	<p>Increase in feeder road network</p>

### Box 37 Prioritised Strategies for Policy Area 4 - Population and Demography

<b>Sector Strategies</b>	<b>Indicators</b>
<p><b>1 Population growth and migration:</b></p> <ul style="list-style-type: none"> <li>• Carry out information, education and communication campaigns to sensitise communities and policy makers on the interrelationship between population, environment and sustainable development</li> <li>• Support family planning and reproductive health schemes</li> <li>• Integrate population issues in development planning</li> <li>• Improve economic and employment opportunities and develop entrepreneurial/ vocational skills for rural and fisher folk</li> <li>• Address conflicts in the Great Lakes Region</li> <li>• Strengthen health programmes focusing on communicable diseases including Malaria</li> </ul>	<p>No. of communities sensitised No. of programmes carried out</p> <p>Increase in number of communities with access to family planning services No. of development plans integrating population issues Reduced urban in-migration</p> <p>Reduced cases of conflicts Increased No. of refugees going home</p> <p>Reduced prevalence of communicable diseases</p>
<p><b>2 Change cultural and social behaviours and practices</b></p> <ul style="list-style-type: none"> <li>• Carry out campaigns and initiate programmes to sensitise communities on causes and implications of HIV/AIDS and STIs</li> <li>• Initiate and strengthen HIV/AIDS intervention programs targeting transient communities – fishermen and long distance truck drivers</li> <li>• Legislate against retrogressive cultural practices and behaviours, which promote spread of HIV/AIDS (e.g. wife inheritance, circumcision)</li> </ul>	<p>No. of communities sensitised No. of programs carried out</p> <p>No. of legislations enacted</p> <p>Reduced incidences of retrogressive practises</p>

### Box 38 Prioritised Strategies for Policy Area 5 - Governance, Institutions and Policies

<b>Cross-cutting Strategies</b>	<b>Indicators</b>
<p><b>1 Good governance and human rights</b></p> <ul style="list-style-type: none"> <li>• Establish and strengthen appropriate anti-corruption measures and strengthen procedures and regulations that ensure transparency/openness</li> <li>• Create awareness and promote access to the public on constitutional and human rights and institutionalise respect for human rights</li> <li>• Strengthen laws on the rights of the child with particular emphasis on orphaned and vulnerable children</li> <li>• Implement provisions of good governance included in the EAC Treaty</li> </ul>	<p>Decrease in instances of corruption</p> <p>Decrease in cases of human rights violations</p> <p>Increased number of communities with access to legal and civil rights specialists</p>
<p><b>2 Harmonisation of laws and policies</b></p> <ul style="list-style-type: none"> <li>• Formulate policies that address sustainable development and poverty eradication</li> <li>• Revise, amend and harmonise existing policies and existing obsolete laws across states, including local authority by-laws</li> <li>• Promote inter-governmental co-ordination</li> </ul>	<p>Number of laws harmonised and amended</p>
<p><b>3 Institutional framework and devolution</b></p> <ul style="list-style-type: none"> <li>• Develop community programs to promote participation in decision making</li> <li>• Streamline guidelines for resource mobilisation</li> <li>• Study and update existing laws in respect of financial decentralisation and resource allocation</li> <li>• Strengthen local government institutions to actively involve people and promote the participation of youths in development planning</li> <li>• Strengthen consultation processes with communities in planning</li> <li>• Awareness campaigns on community resource management and control</li> <li>• Promote positive social and cultural values towards education and training for the youth for gainful employment</li> <li>• Promote participation of civil society organisations in decision making related to local development</li> <li>• Strengthen capacity of existing institutions such as local government, judicial instruments, cultural institutions and communities</li> <li>• Analyse the situation and develop capacity building programs</li> </ul>	<p>Increased number of community development plans meeting (regional) standards</p>

<p><b>4 Law enforcement and security</b></p> <ul style="list-style-type: none"> <li>Strengthen the capacity of the Judiciary to administer law and to empower communities to promote justice with fairness and efficiency to protect human rights at local and central level</li> <li>Formulate and implement security measures on the lake</li> <li>Address cross-border crime, agree and implement anti cattle rustling measures</li> </ul>	<p>Increase number of communities with an acceptable level of law enforcement</p>
<p><b>5 Conflict resolution and peace building</b></p> <ul style="list-style-type: none"> <li>Set up institutional framework and mechanisms for conflict resolution and peace building (e.g. co-ordinated patrols, link with Safety of Navigation recommendations)</li> </ul>	<p>Increased number of mechanisms established</p>
<p><b>6 Gender issues</b></p> <ul style="list-style-type: none"> <li>Gender equality should be reflected in all development and sector plans</li> <li>Re-address lost value systems in relation to gender</li> <li>Promote positive gender relations through shared gender roles for sustainable family and community development</li> <li>Capacity building through civic education with emphasis on participation in leadership</li> </ul>	<p>Raised positive awareness of gender roles in the family and community</p> <p>Increased gender balance in leadership and decision making</p> <p>Increase number of women in leading positions</p>



## 7. RECOMMENDATIONS

The Vision and Strategy Development Project has addressed the situation in the riparian countries only. It is recommended that all countries within, or bordering to, the Lake basin should be included in the next stages of developing of strategies and action plans. The situation in Rwanda and the situation in Burundi both cast major influences on development trends in the lake and its catchment. The two countries, as well as the relevant partners within the Nile Basin Initiative/NELSAP, should be included in the follow-up to the current study.

The formulation of complete strategies and detailed action plans for each policy area should include combining prioritised strategies from two or more policy areas into cross-cutting strategies – or Strategy Packages. These cross-cutting strategies provide a basis for broader (regional) development programmes and integrated Lake basin management, e.g. in line with the National Poverty Alleviation Strategies/Action Programs. Cross-cutting strategies are particularly important for capturing the different aspects of sustainable development as broadly as possible and for mobilising resources across policy areas. Examples of cross-cutting strategies, where inputs will be needed from all or a major part of the five Policy Areas, are:

- Establishing policies and institutions for integrated basin management;
- Developing physical and economic infrastructure;
- Establishing programmes for improved education, training and awareness raising;
- Establishing programmes to confront the HIV/AIDS pandemic including its effects on production and quality of life; and
- Providing clean water and sanitation for all.

The original approach planned for the Vision and Strategy Development Project allowed considerable time for giving feedback to all participants engaged in the process. Due to the various constraints the feedback process has not been carried out. To ensure future engagement, it is important that feedback to the stakeholders at the various levels is given as initially planned. Steps should be taken to ensure that national and regional feedback processes can be realised. Donor support might be sought to ensure that this important element of the vision process be implemented.

In order to follow up and monitor the results of actions taken based on the prioritised strategies, a more detailed follow up on development of indicators will be needed. A system to collect necessary data and statistics for the indicators to be continually monitored should be established and responsibilities for monitoring and reporting be clarified, e.g. by a working group of members from all partner states representing Focal Ministries, Bureaus of Statistics and relevant research institutions and agencies active in the lake basin.

Further strategy development should take into consideration the massive capacity building that has taken place through the vision and strategy development process.

More than 12,000 people have participated in the process in workshops, and approximately one hundred have contributed to the process as members of National or Regional Task Forces or consultant teams. This unique capacity and knowledge base should be utilised for the follow-up work that should be carried out. In particular it is important to maintain the core of NTFs and RTF in the capacity of standing task forces, policy working groups or 'think tanks'. Highly experienced with this type of processes, such groups could have the responsibility of following up the strategy development, monitoring the development of indicators, and suggesting corrective action.



***Photo 7: Lake Victoria's aesthetic beauty can be breathtaking! From a lake shore near Mwanza (by Mark Bain).***

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*East African Community*

# **The Vision and Strategy Framework for Management and Development of Lake Victoria Basin**

## **Annex I: Baseline Information Report**



A report by

**Statkraft Grøner**

in association with

Norwegian Institute for Urban and

Regional Research,

Cornell University

Makerere Institute of Social Research

Dar es Salaam University College of Land

and Architectural Studies

Agrechs Development Consultants

September 2003



# East African Community

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# 1 Background and Introduction

## 1.1 The purpose and scope of baseline data and information

The purpose of the Baseline Information Report is to provide essential background data and information important for the ongoing Vision and Strategy Development Process in the three EAC partner states. The report is an independent part of the International Consultant's Mid Term Report, which is an important reference document between EAC as the client, the World Bank as contract partner, and NORAD as provider of the funding for the consultancy. The report will also be an important input to the forthcoming activities of the Regional Task aimed at harmonising national visions and strategies into a Vision and Development Strategy for the Lake Victoria Basin

As described in Part 1 of the Mid Term Report, the launching of the Vision Development Process in all three countries has faced serious delays resulting in a need to overhaul and revise the overall approach, methodology and Work Plan for the process. Local and national processes will take place within a shorter period than intended at the outset, processes will have to be less comprehensive and partly to run in parallel.

### **The need for a Vision for the future of Lake Victoria Basin**

The Lake Victoria Basin abounds in natural resources. The resources of the Basin provide essential goods and services that support the natural, social and economic systems of Kenya, Tanzania and Uganda. The Lake and the Basin provide enormous potential for healthy and sustainable social, economic and environmental development. The realisation of this great potential lies in the *integrated management* of the Lake Basin across economic sectors and national boundaries.

With population growth being amongst the highest in the world, a weak regional policy framework and lack of agreements of how to manage common resources, the multiple use of the Lake in particular came into increasing conflicts in the late 1980s. Discussions to broaden the regional co-operation started in 1992. With the shared ownership of the Lake the three riparian governments realised that collaboration to achieve sound management was in high demand. With support from donors, the Lake Victoria Environment Management Project (LVEMP) was implemented in 1997, with a time span up to March 2002 for its first phase (LVEMP1). The major focus of this phase has been the ecology and resource situation of

the Lake. To some extent the project has been criticised for focusing too narrowly on central government, technical agencies and private sector stakeholders. The implementation of phase 2 will need a broader focus; hence participatory planning that is central to the vision facilitation process.

The establishment of the East African Community and the subsequent materialisation of an East African Development Strategy 2001-2005 have designated the Lake Victoria Basin as a regional economic growth zone. An important implication of this is the need to prepare comprehensive strategies and action plans for sustainable development of the whole of Lake Victoria Basin. The Vision Statement Facilitation Project is part of this endeavour with the aim to:

- Engage the stakeholders of the Lake Victoria Basin in *defining a vision for sustainable development* of the Lake Basin as well as for their own future;
- Harmonise the visions of stakeholder groups across sectors, regions and levels of governance;
- Develop a Strategic Framework outlining *policies and actions for reaching the goals of the Vision* and a sustainable future for the Lake Victoria Basin.

The major purpose of the present report has been to collect and present basic data documented knowledge for the successful implementation of this process.

## 1.2 The preliminary baseline study (Inception Report)

A preliminary baseline study was prepared as an integral part of the Inception Report. The first report was based on the Terms of Reference for the consultancy, which, at the time, did not include a framework for development of a strategy. The fieldwork for the preliminary baseline study was limited to one week only, as the Client's organisation of the project – in particular the appointment of National Task Forces – was not in place. For the same reason the Consultant also had very limited access to data and information sources as the County Teams were not supported by appropriate letters of introduction.

Participants at the Inception Workshop held in Kampala 12-13 July 2002 commented on the preliminary study and expressed concern that the study did not address important issues such as gender, education, disaster management. References were also made to recent studies by EAC on the institutional and legal arrangements needed for sustainable

development of Lake Victoria Basin and the economic development potential of the Lake Basin. Also regional initiatives like the Nile Basin Initiative and NELSAP<sup>1</sup>, the impact of the Nile Treaty, as well as parallel, sectoral visions and strategies should be addressed.

Additional comments by members of the Lake Victoria Strategic Partnership Committee gave reasons to consider some major changes in the scope and focus of the baseline study as well as to what information gaps that should be filled in. The main concerns and comments expressed may be summarised as follows:

- The Inception Report, as well as the overall methodology, seems to have a restricted focus on the Lake, LVEMP1 and related institutions;
- The baseline study was inadequately addressing the concept of sustainable development and the interlinkages between environment/ecology, economic development and social conditions, in particular regarding the issue of poverty and Poverty Reduction Strategies in the three countries;
- The report does not adequately outline a methodology for strategy development and how strategies should be linked to visions;
- There is too much emphasis on the role of the fisheries compared to other sectors of the economy. The importance of the agricultural sector (as a source of subsistence for more than 80 % of the Lake Basin population) is not adequately reflected, and should be significantly expanded.
- In general the production sector is scantily covered and needs to be expanded, more specifically the role of the private sector and public-private partnerships. Reference should be made to the EAC study on the economic potential of the Lake Basin. The role of the urban areas in economic development and employment creation should be covered in more detail.
- Population and gender issues should be given much more concern.

In addition a series of more detailed, specific issues have been raised, e.g. on land ownership and land use patterns, the role of private, national and regional organisations and institutions, NGOs and CSOs as well as international programmes like The Nile Basin Initiative, in particular NELSAP.

Even though the comments did not seem to recognise the very short period of fieldwork behind the preliminary baseline study and the difficulties met during data collection, the Consultant has found the

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<sup>1</sup> NELSAP: Nile Equatorial Lakes Subsidiary Action Program(s)



comments highly relevant and to the point. The comments have had a strong bearing on the focus of vision and strategy development as well as on the methodology employed.

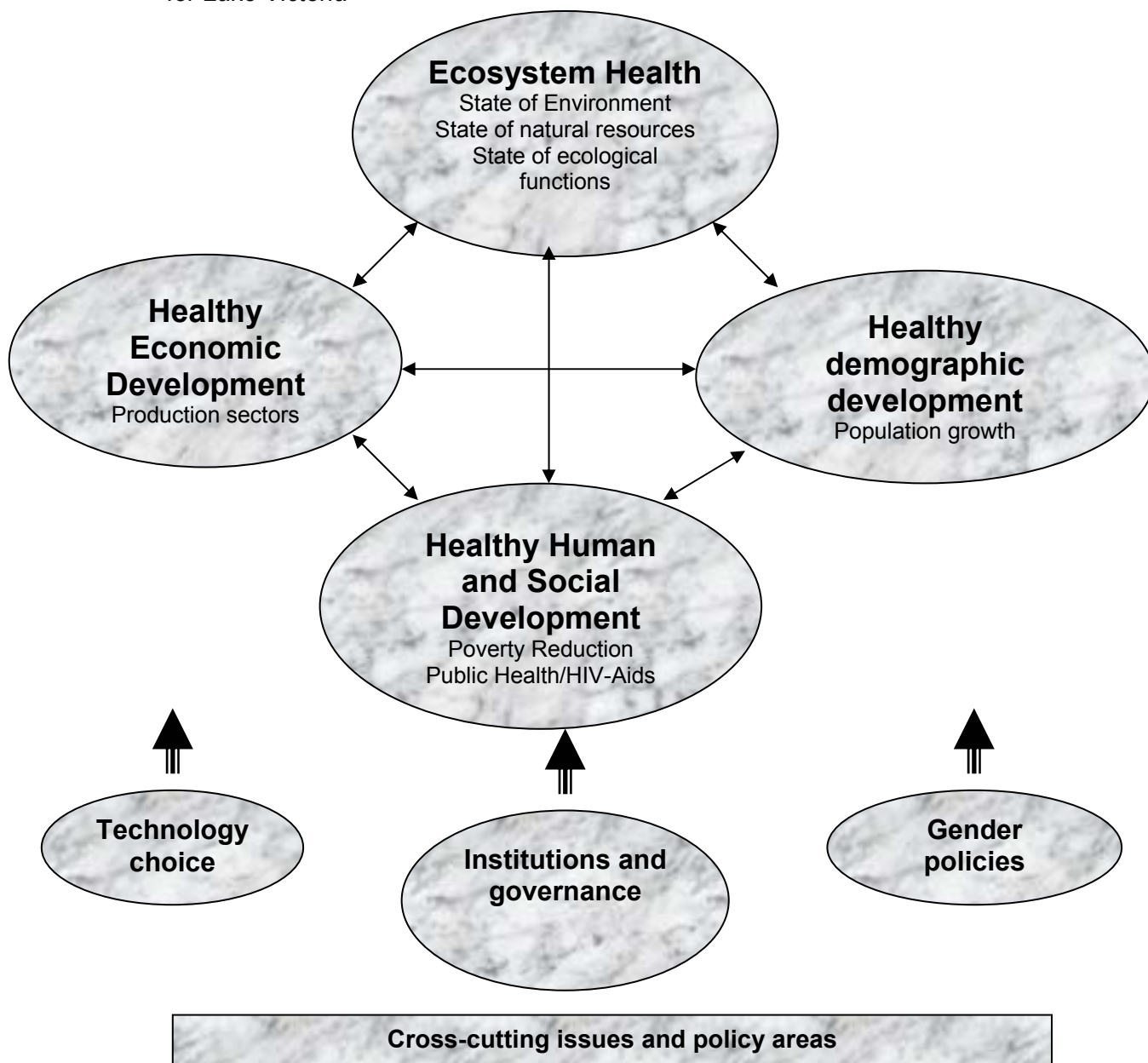
### 1.3 A revised model for provision of baseline data

The concept of sustainable development rests on three closely interlinked tenets: meeting the basic needs of the people without harming ecosystem health and depleting natural resources. This implies that economic growth must be pro-poor and pro-environment. Ecosystem health, quality of life and economic development are closely connected in highly reciprocal processes. A sustainable, 'healthy', development of Lake Victoria Basin implies to put in place social policies, resource management systems and governance institutions that coherently link these dimensions of development.

Healthy ecosystems with high environmental quality are needed to reduce poverty. Vice versa, reduced social poverty reduces the strains on the environment. Sound environmental management is an integral part of the conditions for sustainable economic development; sound resource management sustains the functioning of ecosystems and their production of goods and services to the people. Interference, disturbances or changes in negative directions in any of the parts of the system will have impacts on the other parts and – to varying degrees – lead to harmful consequences for different stakeholder groups and interests.

In a situation of rapidly growing populations there is also a crucial demographic dimension involved: the need to have a demographically 'healthy' population able to meet with future challenges in production life, community development and the need to develop competence, institutional capacity and good governance. Therefore, 'healthy demographic development' may be added as a *forth* dimension of developing visions and strategies for sustainable management of the natural, social and human resources of Lake Victoria Basin. These four elements of environmental, socio-economic and demographic development – and their interrelationships – can be depicted in an overall 'conceptual' (system) model as illustrated in figure 2 on next page.

Figure 2: A conceptual model for development of Vision and Strategy Framework for Lake Victoria



Positive development in one element of this interconnected system gives political options for improvements in other sectors provided adequate strategies, policies and implementing machineries are in place. This underlines the importance of the all-embracing *institutional and governance* aspects intrinsic to the quest for a more equitable, pro-poor sustainable development. In this perspective the issue of *gender policies* is particularly crucial, given the strong position of African women in production as well as in family life. The choice of appropriate and

environmentally sound technologies – e.g. the choice of sustainable fishing methods in Lake Victoria – is another crucial issue in the formulation of long-term resource management policies.<sup>2</sup>

### **Focus on driving forces, effects and consequences for stakeholders**

Environmental stress, economic development, social and demographic changes are closely interlinked. Each of the four ‘spheres’ in figure 2 may be regarded as a *driving force* imposing change. At the same time they are also ‘recipient sectors’ influenced and impacted by changes taking place in the other sectors. Policies, strategies and actions designed to meet the needs of a specific sector should always be evaluated in light of their direct and indirect impacts outside the sector, i.e. in all fields covered by the model. Some types of social effects, e.g. the HIV-Aids pandemic, may be addressed under different spheres as they are crosscutting in character.

To engage stakeholders in discussions on their visions of the future, there is a need to focus on likely *impacts* and *consequences* of present development trends. The observable change processes going on in Lake Victoria and the Lake Basin should be presented in ways that point at the underlying causes – the major short term and long term *driving forces* causing them. In order to distinguish between visions – *where to go* – and strategies – *how to reach there* – a pedagogical tool is called for that illustrate how present trends negatively affect various stakeholder groups, as well as pointing at possible policy options available to offset them. Discussions will have to focus on the present situation, on-going changes, the driving forces and their likely consequences for the actual stakeholder groups.

The revised methodology combine information on the present situation (baseline data) with information needed for the discussion with stakeholder groups, i.e. what was termed *information packages* in the Inception Report. In a situation of critical time constraints, we regard it crucial to streamline baseline information to what is most strongly needed for the effective running of stakeholder meetings and discussions. According to the ToR the vision statement process was never supposed to commission research or to undertake specific surveys on its own. As far as possible duplication of data already contained in existing documentation should also be avoided.<sup>3</sup> The data sources will have to be the preliminary

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<sup>2</sup> Linking Poverty Reduction and Environmental Management – Policy Challenges and Opportunities. DFID; DG of Development, EC; UNDP; and the World Bank. July 2002.

<sup>3</sup> Examples of such data sources are the EAC/SIDA study on “Institutional and Legal Arrangement for Sustainable development of Lake Victoria Basin” (2001) and the recent

baseline study and additional information collected by the Country Teams to fill the noticed information gaps based on existing policy papers, research studies and statistics. This information will be supported by personal knowledge and insight of the participants in the vision process – in essence the NTF members, the consultants and the people consulted. Information packages – outline and content.

For the sake of harmonisation of the national processes in the three countries, information packages will have identical structure and, essentially, covering the same major issues. Although it is believed that most information presented to the stakeholders will be made verbally, there is a need to have a common ‘script’ for the facilitators. This is even more crucial since these processes will have to be run in parallel in different locations. For each main elements of the overall conceptual model – i.e. ecosystem health, economic development, social and demographic development – stakeholders should be presented with relevant, adequate and up-dated information for them to engage in discussions on visions and future strategies.

At the same time the number of information packages will have to be limited. Given the differences between the three countries the actual packages have been adapted to the particular situation in each country. Given the time constraints we have decided to limit the number and themes of information packages as illustrated in the box at next page.

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EAC study on “Economic Potentials and Constraints for Developing Lake Victoria Basin as an Economic Growth Zone” (October 2002).

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- 1 Methods and Approaches in the Development of Vision and Strategy  
(1 common package for the three countries)  
*An overall presentation of the concept of sustainable development and the interlinkages between environmental management, socio-economic development, poverty reduction, health and demography (as well as the close interlinkages needed for a healthy man-nature ecosystem).*
- 2 Integrated Lake Basin Management  
(1 common package for the three countries)  
*A presentation of the principles, challenges, issues and opportunities of integrated lake basin management of the Lake Victoria catchment area.*
- 3 Ecology, environment and natural resources  
(1 common package for the three countries)
  - *Drivers of ecological and environmental change*
  - *Present trends, long term and short term threats*
  - *Natural resources uses and management*
- 4 Production, employment and income generation  
(Country specific packages, separate or combined)
  - *Agriculture and forestry*
  - *Fisheries and related activities*
  - *Wildlife and tourism*
  - *Mining and industry*
  - *Urban based economic activity*
- 5 Social and demographic conditions (Quality of life)  
(Country specific packages, separate or combined)
  - *Poverty and income distribution*
  - *Employment and income generation*
  - *Population (growth, households, age distribution, migration)*
  - *Health (incl. HIV-Aids)*
  - *Education and training*
- 6 Governance, policies and institutions  
(Country specific packages, separate or combined)
  - *Legislative barriers to co-ordinated policies and actions*
  - *Decentralisation and public participation (local resource management)*
  - *Gender issues in policy development*
  - *The role of NGOs and CSOs*

## 2 Ecology and Environment

### 2.1 The need to focus on ecology and environment

Lake Victoria has displayed massive ecosystem change in the relatively short three-decade period thought to span an original intact system to one still foundering in unanticipated ways. Great state changes have occurred in water quality, nutrient cycling and food web structure of the lake leading also to changes in biodiversity. Introduction of alien species such as the Nile perch and the water hyacinth is thought of being responsible for at least part of this change (Bain et al. 2003).

Ecological health and the goods and services the ecosystems of the Lake Victoria Basin provide are the basis for sustainable development in the area. Future development of agriculture and fisheries as well as the alleviation of poverty and health problems rely vitally on a healthy environment. The *goods* of the ecosystems are characterised by capital stock and production – e.g. the amount of trees and fish in an area (stock) and the yield they provide (production). The *services* are the processes that ecosystems provide, for example purification of water and human waste, assimilation by wetlands and runoff regulation by catchment forests.

The Lake Victoria Basin (see map, figure 3, next page) is made up of a great variety of ecosystems that provide a wide range of goods and services for the population in the area, however it has become under pressure for a variety of reasons, as described above. Key areas of concern are:

- Increased pressure on water resources
- Habitat loss along the Lakeshore
- Forest degradation in the catchment
- Lake Plain and Floodplain degradation
- Decrease in fish biodiversity and altered food webs
- Invasion by water hyacinths
- Pollutants from non-point source (nutrients, animal waste fertilizers) and point sources (chemical contaminants from industry e.g.) in the catchment.
- Wildlife degradation in the catchment due to loss of habitats, forests and poaching



## 2.2 Present situation and drivers of change

The stresses and changes on the ecosystems in the lake basin have developed in a variety of forms over the years, and the effects are numerous. Some major threats to ecology and environment are briefly described below. There is a rich research literature on most of these issues as shown in the reference list, but the main purpose here is to give an picture of the overall situation in the Lake Basin as well as the vast options and opportunities provided by these resources if managed properly.

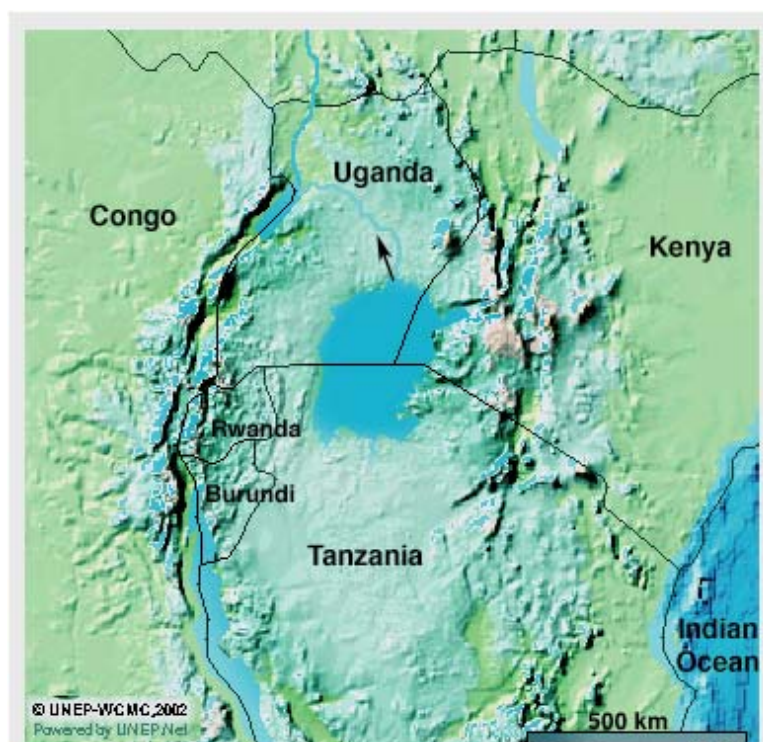


Figure 3. Relief Map of East Africa and Lake Victoria Basin.

### Habitat loss

One important class of habitat under pressure is wetlands. Wetland habitats provide direct benefits to local people and suffer from overuse and destruction. Increasing human population, land based economic activities and extraction of goods and services have contributed to degradation and elimination of wetlands. Wetlands are also degraded by abusive practices like waste dumping, land runoff pollution, and excavation of sand and clay. Other uses like water supply development, wood harvesting, papyrus removal for handicrafts and shelter construction, are compatible with wetland functions if managed at sustainable levels.

Reliable estimates of wetland loss are not available. Some recent remote sensing assessments of wetland change show losses of wetlands to intensive scale agriculture. Pressure on wetlands take various forms like land acclamation for settlements, road construction, draining for agriculture, waste dumping, land runoff pollution, excavation of sand and clay, papyrus extraction, brick making and hunting for subsistence.

### **Biological communities**

Lake Victoria has changed from being a one of the richest water bodies on earth in fish diversity to a lake dominated by three introduced fish species. The lake has always supported subsistence fishing critical for supplying protein to local people, and now a single-species fishery supplying fresh fish to markets mainly in Europe dominates. Introduction of alien species – the most prominent being the Nile perch and the water hyacinth – is believed to be a major reason for the alteration of many communities of aquatic and terrestrial species associated with the lake. Lake Victoria has created world wide conservation attention because of the disappearance of 200 to 250 cichlid fish species associated with the introduction of the Nile perch in the 1950s. The World Conservation Union (IUCN) has listed hundreds of species endemic to the lake as endangered. However, several major environmental changes contribute to the decline, especially increased nutrient inputs, climate change and overfishing with fine-mesh nets.

Over harvesting of indigenous tree species and loss of large forest communities to forest plantations, agriculture and settlements have led to a catchment dominated by exotic tree species. These changes have degraded the wildlife that was once supported by indigenous tree species and forest ecosystems. Both Nandi and Kakamega forests, for instance, have less than half of the indigenous bird species.

### **Pollution**

Inputs of nitrogen and phosphorus to the lake are largely from atmospheric deposition. The concentrations of these nutrients reflect a mesotrophic status for the open waters of the Lake. Nutrient inputs from the land, tributary watersheds, and industrial and municipal sources are not highly influential on whole lake water quality, but give rise to serious eutrophication in some specific lakeshore areas. Shoreline areas, gulfs and bays also witness oxygen stress due to nutrient and waste inputs. Although good trends data are lacking, it is widely believed that Lake Victoria is experiencing eutrophication. Heavy metals and industrial contaminants can be found in the lake tributaries, near shore areas and bays. Animal and human waste also cause pollution problems around the lake in urban as well as in concentrated rural settlements.

## 2.3 Impacts on environment, economy and quality of life

Wetland habitats need to be managed carefully for maintaining wetland-derived benefits on a large scale. Wetlands are probably most important in providing the ecosystem service of removing nutrients and sediment from lake tributaries and near-shore overland runoff's. However, these habitats directly support local people around Lake Victoria by providing land for crop production, dry weather grazing land, year round groundwater supply, and plant material used in crafts and construction. The lake-associated wetlands also harbour high numbers of birds, fish, and other easily seen wildlife valued by tourists. Shoreline wetlands have been shown to act as refuges for fishes consumed by Nile perch and for other species with specialised requirements like lungfish.

Degraded wetland habitats leads to increased nutrient concentrations and pollution, degraded ecosystems and poorer water quality in the lake and its tributaries. This affects the primary users of the lake ecosystem and the services provided by the lake in terms of uncontaminated water supply (see also Parts on water resources and fisheries).



Photo: By Mark Bain. Typical lake basin wetland area close to Mwanza, Tanzania.

The effect of the introduction of the Nile perch leads to a simplified food web structure in the lake, less biodiversity of native fishes and proliferation of the amount of exotic species. Groups that have been heavily affected by this are especially the poor lakeshore communities that heavily relied on native species for subsistence. Again, to create opportunities for the poor is to involve them in sound management and utilisation of the fishery resources.

Alteration of the aquatic communities as well as effects on human pathogens and insect pests have also been attributed to the water hyacinth invasion during the 1980s and 1990s. Even though the plant has been reduced by over 80% following biological control using weevils assisted by mechanical removal and manual harvesting, it is still affecting local fishing, causing abundance of insect pests and hindering water transportation.

Increasing destruction of forest and wetland ecosystems has two hydrological consequences. First is a reduced spongy-like effect of vegetation on overland flow leads to local vulnerability to flood hazards, especially in the floodplains of Nyando in Kenya. The costs of floods to the local people are enormous – destruction of property, loss of human life and exposure to relief foods. Secondly, loss of vegetation cover associated with degradation of these two key ecosystems leads to poor infiltration of overland flow and drop of river volumes during droughts – forcing the local communities to trek long distances for water or rely on unhealthy sources.

## **2.4 Consequences for specific stakeholders and vulnerable groups**

Effects of degraded wetlands are loss in goods for production (e.g. grazing land and raw materials for domestic production) as well as decrease in the quality of services (e.g. increased flash floods health hazards and less ability to assimilate human waste). In particular groups living along the lakeshore and in wetlands, e.g. fisheries communities and subsistence farmers are affected by the degradation of wetlands. Opportunities for improving the ecological health of wetlands in the Lake Basin will rely on enhancing the capacity of local people to manage their environment as well as to strengthen their resource rights. Furthermore, deforestation in the Lake Basin leads to higher risk of flash floods in tributaries (in magnitude and frequency of floods) the tributary areas. Areas in marginal flood prone areas near rivers are often inhabited by the poorest people in the society.

The introduction of Nile perch has greatly changed fishing in the lake and the economic conditions for subsistence as well as commercial fishing. This has heavily affected by poorer lakeshore communities that have heavily relied on native species for subsistence. Again, to create opportunities for the poor will be dependent on involving local communities in sound management and utilisation of local resources.

While increasing exotic tree species in Lake catchment is reducing local demand for firewood, the long-term consequences are far reaching. Decreasing land parcels pose a problem to crop producers who find most exotic tree species incompatible. The local herbalist whose service to majority who cannot afford modern drugs depends on indigenous tree species is also threatened. Along with these changes is loss of indigenous knowledge that is critical in sustainable management of forest ecosystems. Currently, livelihood of the Okiek people who reside on the Mau Narok forest, a key catchment of Lake Victoria, is threatened by on-going wrangles between the government and this indigenous group. Recognising the rights of marginalized group is crucial for sustainable management of indigenous forest ecosystems.

### **3 Natural resources, production and income generation**

Sustainable development rests on three closely interlinked tenets: To meet the basic needs of the people without harming ecosystem health or depleting natural resources. This implies that economic growth must be pro-poor and pro-environment. Ecosystem health, quality of life and economic development are closely connected in highly reciprocal processes. A sustainable, 'healthy' development of Lake Victoria basin implies to put in place social policies, resource management systems and governance institutions that coherently link these dimensions of development.

The existence of employment opportunities and sources of income generation are a core factor to combat poverty. Today more than 50% of the population in EAC countries have an income below the UN poverty line of 1 US\$ a day. This chapter of the report provides baseline information on the natural resource base of the Lake Victoria Basin and the role of these resources in production and employment creation to address the overarching challenge of poverty.

#### **3.1 Water resources and water use**

Water is vital to all life. Access to clean and safe water is regarded as a major requisite for poverty alleviation, improving human health conditions and promoting sustainable development. At the same time we observe that water as a precious natural resource to an alarmingly increasing degree is threatened by contamination from human activity. At present a chain of vicious circles contribute to the degradation of water resources as well as impeding the provision of and access to clean and safe water for consumption.

The waters of the Lake Victoria Basin provides fresh water for domestic, industrial, agricultural and recreational use as well as securing the conservation of biodiversity and ecosystem functioning of large wetland and forest areas. The Lake is also provides a major transport route for people and goods. Some rivers in the basin have considerable hydroelectric power potential. Therefore, effective and co-ordinated systems of integrated management of the water resources will be a crucial precondition for a healthy environmental situation and sustainable socio-economic development in the Lake Basin.





Photo: By Mark Bain. Lakeshore areas close to Mwanza, Tanzania.

### **Present situation, trends and driving forces**

Lake Victoria is the largest fresh water source in Africa and the second largest in the world. It has a surface area of 68800 km<sup>2</sup>. The Lake is recharged mainly by rainfall in addition to the run-off water the some major rivers.<sup>4</sup>

The 3,500 km of shoreline is shared by Tanzania, Uganda, and Kenya and the basin includes two others countries (Rwanda, Burundi) in the highlands to the west (see map, figure 3). Lake Victoria is situated in an elevated (1122 m) depression surrounded by highlands and the two forks of the Rift Valley. Highlands and the Mitumba Mountain Range on the west with other Rift Valley Lakes, mark the division with the Congo River Basin. To the east the East African Highlands are bisected by the main Rift Valley. To the south are high plains of central Tanzania, and the White Nile River leaves Lake Victoria to the north through the hilly terrain of Uganda. Lake Victoria's volume of 2,760 km<sup>3</sup> is small compared to its surface area due to its relatively shallow mean depth of 40 m, maximum depth is 84 m (Klohn and Andjelic 1998, Ntiba et al. 2001).

<sup>4</sup> It is estimated that from 118 billion cubic metres of water annually entering the lake from rainfall and stream flow, 80% (94.5 billion cubic metres) evaporates leaving 20% to flow down the Victoria Nile. The last 50 years there has been a small positive inflow, which accounts for the rise in the lake water level of approximately 1meter in this period (COWI 2000).

82 % of the water entering Lake Victoria comes from precipitation directly falling on the lake surface with stream-flow and basin runoff contributing just 18% (COWI 2002). Water inputs to the lake are almost balanced by a large rate of evaporation (3,330 m<sup>3</sup>/s, 76% of inflow annually) and a relatively small discharge to the White Nile River (1046 m<sup>3</sup>/s, 24%). Short-term differences between water inputs and losses have caused a few meters fluctuations in the lake level of in years of high precipitation or drought. The Lake was completely dry 12,400 to 14,000 years ago (Johnson et al. 1996, Scholz and Rosendahl 1988) but was first formed as much as 750,000 years ago (Kendall 1969). For the recent decades, Lake Victoria has on average a long flushing period (140 years) but fairly short water residence time for such a large lake (23 years, including evaporation and rain interception). There are considerable variations in annual rainfall in the lake catchment area. In the dry areas of the southern parts of the Basin most streams and rivers are seasonal and dry out during the dry season.

Lake Victoria provides the major water source for both urban and rural areas in the vicinity of the lake. However, in the basin as a whole water resources are inadequately distributed and, in some areas, depending heavily on rainfall. In many places the majority of women travel long distances to collect water. Lack of clean and safe water contributes towards water borne diseases such as cholera and typhoid. Boreholes, water pans, ponds and wells are inadequately developed, have low yields and often dry up, forcing people to use contaminated water from unprotected sources. It is estimated that on an overall basis less than 40 % in the rural areas of the Lake regions and somewhat more than one half (55%) in the urban centres have access to safe and clean water within acceptable distance.<sup>5</sup> None of the urban centres are able to meet the demand for clean water due to poor water supply infrastructure.

Outside the urban areas there are virtually no system for disposal of human waste. High population density, operational problems and lack of maintenance make urban sewage systems overloaded and poorly functioning. Untreated human waste is drained directly into streams and rivers eventually ending up in the Lake. The contamination is compounded by the fact that degradation of wetlands has lost some of their filtration and purification capacities.

Introduction of alien species is believed to be a major reason for the alteration of many communities of aquatic and terrestrial species associated with Lake Victoria. Clearly the most prominent are the Nile

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<sup>5</sup> Source: EAC (2002).

perch introduced in the 1950s and water hyacinth during the 1980s and 1990s, although now been noticeably reduced following from biological control using weevils assisted by mechanical and manual removal and harvesting.

The management and control of the water resources and their use is split between different agencies. For the rural areas tasks and responsibilities are in the hands of different Central Government institutions. The urban councils have had the responsibility for water supply and sewage systems in their areas of jurisdiction, but regularly under situations of severe financial stress and poor revenue collection. The water sector has historically attracted broad donor support, often of a local nature and with little effort towards co-ordination. However, since the early 1990s several donors and international financial organisations like the World Bank have emphasised the need to address the transboundary character of water resources management in the Lake Basin. Lake Victoria Environment Management Program (LVEMP), Lake Victoria Fisheries Research Project (LVFRP) and Lake Victoria Fisheries Organisation (LVFO), and on an even large scale the Nile Basin Initiative, the are all examples of such efforts. However, again, with seemingly with limited internal co-ordination.

### **Some important impacts on environment and quality of life**

The various water systems in the Lake Basin show signs of degradation and depletion, mainly because of over-abstraction, diversion, destruction of filtering mechanisms and release of agro-chemicals, waste and refuse to water bodies. At the same time the demand for water is increasing with population growth and economic development intensifying the pressure on the resource.

Industrial contamination and discharge of heavy metals<sup>6</sup> occur in some parts of the Lake and its tributaries. The overall impact on the Lake is presently limited to specific sites reporting significant local scale problems. Waste inputs in some heavily populated enclosed bays and gulfs cause local oxygen stress. Heavy metals are detected in stream water from mining areas (e.g. Mwanza region in Tanzania and Kisumu in Kenya) and high mercury concentrations have been encountered in water, soil, and stream sediment samples from gold fields. In most urban and village areas around the Lake disposal practices for human and animal waste are so poor that it represents one of the clearest threats to the human environment. Human waste is mostly contained in crude latrine pits and allowed to drain to the lake during wet times or intentionally discharged to streams for transport out of a local area. Animal waste is not handled beyond spreading on dry land. Raw sewage is disposed directly into the

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<sup>6</sup> Heavy metals include chromium, nickel, copper, manganese, zinc, and lead.

lake as sewers and sewage treatment systems in the urban centres in the Lake regions are functioning poorly.

Water-borne and water related diseases contribute to increased total mortality as poor sanitation leads to higher exposure to diseases like dysentery, diarrhoea and typhoid fever, widespread in villages along the lake. Areas least covered by safe water supply and sanitation show higher incidences of such diseases. In some areas (e.g. in Mwanza and Kisumu) untreated sewage and other wastes with high bacterial concentrations cause human health jeopardy with any water contact. Finally, fish landing beaches and associated villages have been contaminated with discarded fish parts and waste. This problem has received attention and improvement following the temporary import ban from EU on Nile perch from East Africa because of bacterial contamination.

### **Consequences for specific stakeholders and vulnerable groups**

The use of water has considerable socio-economic and equity implications. Water resources in the Lake Basin are unevenly distributed and in many places lack of adequate and dependable supply of water is a major constraint to economic development. Lack of clean and safe water also has health implications connected to water borne diseases like bilharzia, cholera and typhoid. Lack or shortage of water has obvious gender and poverty implications, since women and the poor are the most severely affected by long distances to find water. The poor also tend to live in areas without proper water supply and sanitation.

Sound management of water to secure equal access to clean water for all has to be based on some overall, basic principles. Water has to be regarded as a social and economic good needed to sustain life; i.e. water is needed to support economic development as well as alleviating poverty. Systems of integrated water management – including local involvement, in particular observing the pivotal role of women in providing, managing and safeguarding water – are needed to address the problems related to decline in water availability and quality.<sup>7</sup>

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<sup>7</sup> The four Rio-Dublin Principles for water management states

1. Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment
2. Water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels
3. Women have a central part in the provision, management and safeguarding of water
4. Water has an economic value as well as being a social good its use for sustaining life and the environment

Source: *The Africa Water Vision for 2025*

These principles underline the direct links between poverty, social well-being and access to and management of water resources. The present deterioration in water quality and the increased threats from pollution from both point and non-point sources in the Lake Basin have a number of direct implications and consequences for its population:

- Health effects such as the spread of malaria and waterborne diseases like bilharzia, typhoid, dysentery and cholera as a result of stagnant and/or polluted water;
- Constraints to growth in agricultural production and improved food security in the region;
- Impacts on water available for livestock production, e.g. algae blooms can render water unsuitable for cattle and in extreme cases are known to be fatal;

And as for the economic impacts:

- Additional costs for water treatment and purification;
- Loss of potential development and income potential as polluted water would prevent the expansion of tourism to the Lake.

### **3.2 Aquatic resources, fisheries and related activities**

Fish catching and processing for export, as well as for the supply of local markets, are, next to agriculture, one of the most significant economic activities in the Lake basin. The fisheries sector employs over 500,000 people directly or indirectly. The total landings from the three riparian countries are more than 500,000 tonnes per year. The result of this high level of activity has been severe over-fishing of Nile Perch and other species. This has put great strain on artisanal fishing resulting in growing unemployment. Local fisher-folk, squeezed by declining catches and falling fish prices, have resorted to the use of small mesh nets and, in some cases, to the use of poison with detrimental consequences for the fish-producing environment and to fish stocks.

The change in fisheries appears to have affected special groups' access to resources. During the pre-perch period, most of the small boats and the associated simple fishing gear were owner-operated. Today the technology is more complex and expensive. Absentee entrepreneurs with vertically integrated management systems and large capital investments dominate the fisheries. Traditional fishmongers, the majority of whom are women, are being forced out of business. The emphasis on processing fish for export, particularly Nile perch, has reduced the supply and choice available to local consumers. It has also caused prices to increase.



## Present situation, trends and driving forces

### Kenya

A large number of the local population is engaged in harvesting, processing and trading sectors of aquatic and fisheries resources. In the 1970s, some 50,000 people operated 12,000 canoes catching about 100,000 tones of fish per year. More people joined fishing activities immediately after the increased stock of the Nile perch. A great number has since left fishing due to the decline in fish resources and competition from private industry. Since the 1980s, there has been a considerable growth in the number of private companies processing and exporting fish products, especially to the European market. The fish landings in Kenya between 1970 and 1990 is given in Figure 4.

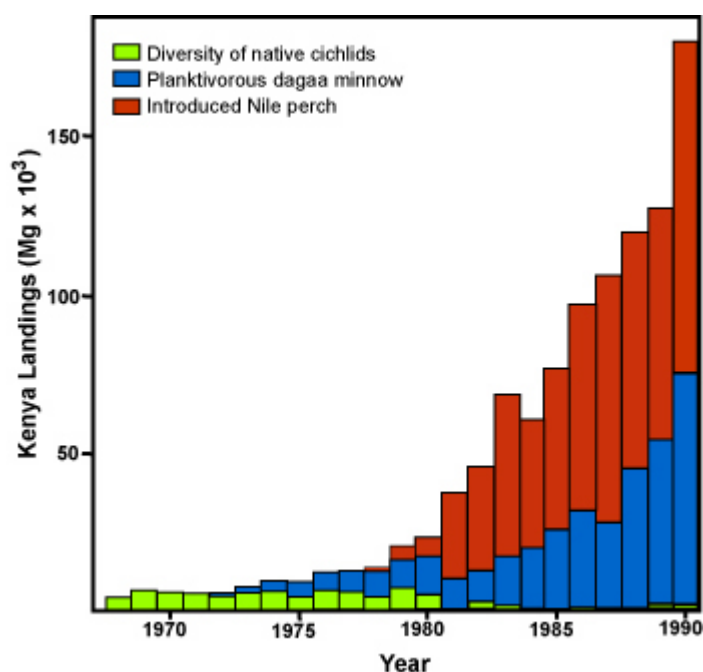


Figure 4. Total yearly landings of native cichlid fishes, the native planktivorous dagaa, and the introduced piscivorous Nile perch (redrawn from Kaufman 1992).

For a long time, the fisheries sector has supported primarily or complemented other sectors among the Lakeshore and catchment Districts, respectively. Fish products have been and still are the main source of protein, and income to Lake adjacent communities. Fish trade has maintained socio-economic ties between Lakeshore and highlands Districts since time immemorial, often serving as a source of food security in the two areas that are ecologically and culturally different. Fish industry



is also a source of foreign currency that is badly needed for purchase of imports. Through export and other local marketing initiatives, the fisheries sector employs a colossal number of people. Increasing threats to fisheries therefore have impacts on income and food security of the local population

Dependence by the local population and the national government (through earning of foreign currency) is threatened by poor fishing methods and ecological changes in the Lake that are associated with introduction of alien species and accumulation of nutrients. While indigenous fish species such as cichlids and, the catches and size of alien species such as the Nile perch is also on a declining trends. This calls for integration of both subsistence and commercial needs for effective management if sustainable fisheries resources are to be achieved. Promotion of fish farming through provision of credit facilities and technical support among disadvantaged groups may reduce current pressure on the Lake for fish resources.

Fish landing beaches are a source of livelihood for the local population engaged in fish processing and sale of fish products and groceries. However, uncertainty and fluctuations in fish prices affect fisherfolks' morale and confidence in the business. However, increased pollution and environmental degradation, the water hyacinth problem, and competition from commercial fishing and handling companies challenge their situation. The water hyacinth creates pressure on local economies through obstruction of transport, as well as increased cost of water supplies and fish harvesting. However, water hyacinth is also utilised in the cottage industry and in feeding of livestock.



Photo: By Grete Klavenes. Water hyacinths in Kisumu bay area, Kenya.

Women engaged in small-scale, non-commercial processing of fish, have access only to juvenile or second quality fish. As the major players in fish trade women also suffer from lack of storage facilities for preserved fish. Contrary to past trends, some women now engage in the fisheries on a commercial basis. This cadre owns fishing boats, providing employment to fishermen and fishmongers, and is to some extent counteracting the exploitation of women at landing beaches where lead men (*jaboya*) demand sex from fishmongers before selling. This practice has become rampant with declining resources, and accounts, in part, for the increasing prevalence of HIV/AIDS.

### **Tanzania**

Large and small-scale fishing is one of the major economic activities along the lakeshore. Out of the estimated 28,000 fishermen in the Tanzanian side of the Lake Basin it is estimated that 9 % (about 2500) are in Kagera region, 65% (about 18,100) in Mwanza region, and 26% (about 7400) in Mara region. The fishermen on the Tanzania side of the Lake land together about 176,264 tons of fish using about 4200 planked boats and canoes. There has been a rapid build-up of fish processing factories around Lake Victoria in response to the international demand for Nile perch. This trend was generally observed during the 1990s. In turn the established fish processing factories have created jobs for local population

within the factories and as commercial fisherman within the Lake.<sup>8</sup> This expansion coupled with the declining catches has forced processors to start adjusting from the previously accepted minimum weight of 2 – 3 kg of Nile Perch to lower limits. Since September 2002 Tanzania has unilaterally banned fishing, buying and processing fish below 0,5 kg. Since equivalent regulations are not in forces in Uganda and Kenya the smuggling of fresh Nile perch has increased.<sup>9</sup>

The increase of fishing is definitely contributing towards national revenue through taxes, although the level of contribution of such taxes to local communities remains uncertain. Furthermore the result of this high level of activity has been severe over-fishing of Nile perch and other species. This has put great strain on the artisan fishing industry resulting in growing unemployment for this category of fisherman. Some local fisher-folk, squeezed by declining catches and declining fish prices, have resorted to the use of poison fishing and small mesh nets with detrimental consequences for the fish-producing environment and to fish stocks.

In the past, the lake basin did have a high diversity of aquatic and fishery resources basically used for local consumption. Prior to the introduction of Nile Perch in the late fifties local communities depended upon native tilapia and the huge diversity of small native fishes for their fishing. Due to the shift in fish ecosystem composition in the lake, most probably derived from the introduction of Nile Perch, many indigenous species, which provided cheap and easily available protein for the lakeshore communities, disappeared. There are now signs that some species are resurfacing, but in sum the lakeshore communities have been left with lower availability to fish stocks. Artisanal fishing has declined resulting in growing unemployment in the local communities. Also it has been urged that this decline in supply is the cause of malnutrition prevalent within the Lakes riparian communities. The prevalence of malnutrition has been evidenced through different surveys.

### **Uganda**

The fisheries sector contributes to significant employment opportunities in the Ugandan Lake districts. Employment in the fisheries sector grew from 80,000 in 1989 to 140,000 in 1997. Fishing involves a wider variety of people: fishermen, processors, exporters, wholesalers and retailers, and the local administrators. Owing to the commercial fishing and export oriented industry, plus challenges of declining catches due to the predatory nature of the Nile Perch, over-harvesting and the water hyacinth problem, participation of local fisher folk has decreased.. Women who

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<sup>8</sup> The total number of jobs created within the factories is not known.

<sup>9</sup> *East African* January 13-19, 2003, p.5

dominated processing and trade have also been marginalized. On the other hand, the absorption capacity of the factories does not equal the original production and processing arrangements.

The structure of ownership has shifted and the new native owners are wealthier and based in main cities. Contrary to past trends, among the new owners are a few women who own fishing boats, providing employment to different fishermen and fishmongers.

### **Some important impacts on environment and quality of life**

The remarkable deforestation especially along the lakeshores, which is a result of high wood demand for fish preservation and processing, is a major ecological concern. Environmental degradation as well as competition following from direct access to landing beaches by commercial companies threaten local fish landing beaches and the livelihood options they provide. In the past, the Lake Basin did have a high diversity of aquatic and fishery resources. Given the shift in fish ecosystem composition in the lake, most probably caused by the introduction of Nile perch, many indigenous species, which provide cheap and easily available protein, have disappeared (although some are currently resurfacing). This has left the communities with less fish. It has been urged that this decline in supply is the cause of malnutrition prevalent in lakeshore communities as evidenced through different surveys.

Due to increased rate of immigration, stimulated by rapid development and new employment opportunities in the commercial fishing industry, the likelihood of infection rates of STIs and STDs including HIV/AIDS has increased. A major challenge, therefore, is to address the question in what ways present livelihood trends can continue without detrimental consequences to the Lake and the Basin. Another equally important challenge in view of the ongoing structural changes in fisheries, is to what extent the poor, artisan fishermen can remain in the growing chain of fishing industry.

### **Consequences for specific stakeholders and vulnerable groups**

The regions within the Lake Basin are among the most populous regions both in Kenya, Tanzania and Uganda.<sup>10</sup> The high population growth rate in the Lake Basin have significant implications for the food demand and the environmental situation. The driving forces of the rapid population growth are high fertility rate, marriage patterns, non-use of family control methods, as well as the influx of refugees and labour seeking migrants from neighbouring countries.

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<sup>10</sup> In Tanzania, based on the 1967 and 1988 population census, the population growth rate is estimated at 2,6 percent per annum.

### **Artisan fishermen**

In spite of the increasing growth of the general population, the number of people in the local communities involved in artisan fishing has gone down due to decreased catches and the fact that more and more of fishing is undertaken by commercial vessels and directed to processing industries. Local artisan fisherman face a number of problems, often forcing them to change trade:

- Lack of storage facilities affects the fisher folk's morale and confidence in the trade and business, and especially women who are major player in fish trade have greatly suffered.
- Environmental degradation and competition following direct access to landing beaches threaten fish landing beaches and the livelihood options they provide by commercial companies.
- Local economic activities through fishing have been disrupted by water hyacinth blocking important waterways, fishing areas and landing beaches. However, at present the water hyacinth problem is decreasing, especially in Tanzania and Uganda.

### **Local Communities**

Owing to the export orientation fish industry, the number of people in the local communities involved in fishing has declined. Fish catches by artisan fishermen have decreased as more and more of fishing is undertaken by commercial vessels and directed to processing industries. Local artisan fishermen face a number of problems, often forcing them to change trade:

- Lack of storage facilities affects the fisher folk's morale and confidence in the trade and business, and especially women who are major players in fish trade have been greatly affected.
- Local economic fishing activities have been disrupted by water hyacinth, delaying fishing operations and transportation by blocking important waterways and landing beaches.
- It has been urged that the observed decline in fish supply to local communities is the cause of malnutrition prevalence within the Lake riparian communities. The prevalence of malnutrition has been evidenced through different surveys.

The decline in catch has led to migration of fisher folk to less crowded fish beaches, and specialisation in less marketable species. Marginalization of local fisher folk could lead to reversion to agriculture, thus putting more pressure on land or migration to urban areas, exacerbating the unemployment problem.





Photo: By Tore Hagen. Fish landing beach near Mwanza, Tanzania.

For local communities, the decline in fish supply to the local markets partly contributes to malnutrition prevalence within the Lake riparian communities. For poor consumers, only fish rejects and perch frames are readily available for sale. The supply is likely to decrease further with increasing efficiency. This has detrimental impact on the nutrition, food security of the relevant communities. Owing to prevalent gender and age-based inequities, women and children are likely to be the most affected, due to cultural eating taboos associated with certain fish species. The nutrition problem is likely to be exacerbated by the decline in catch of the Nile perch, and the commercial marketing of tilapia and dagga.

### **Youth**

Due to increased rate of immigration, stimulated by rapid development in commercial fishing industry and new employment opportunities around the lakeshore, the likelihood of sexually transferred diseases (STDs), including HIV/AIDS, has increased.



### **Women**

Fish trading has been done by many women in the past. A decrease in the local fish business implies a decline in economic status of the many women who are involved in processing and trading.



Photo: By Grete Klavenes. Women engaged in processing of Nile Perch waste products close to a Nile Perch processing factory in Kisumu, Kenya.

### **3.3 Agriculture**

Agriculture is the most important economic activity in the Lake Victoria Basin providing food for the rapidly growing population, raw material for the agro-industries, employment for the majority of the rural poor as well as foreign exchange for the country. More than 85% of the population of East Africa live in rural areas where agriculture is the main source of income and employment. Subsistence farming is widespread. Even among the fish traders and fishermen, agriculture is the most important complementary activity. Just in terms of its economic and demographic magnitude, the agricultural sector will have a prominent position in the formulation of the Vision and Development Strategy for Lake Victoria Basin. As the major provider of food the agricultural sector is crucial for food security, nutrition and human wellbeing. Also important are farming systems that have got direct bearing on the quality of the environment through land acreage under cultivation, use of agro-chemicals and its contribution to household food security.

### **Present situation, trends and driving forces**

The Basin's contribution to the national GDP is averaged at around 16%. About 85% of the Lake Basin population are engaged in the production of food and cash crops<sup>11</sup>. Agricultural production occupies on average 75% of the labour force of the Lake regions, in some places as much as 90% (Kagera, Tanzania). The majority of the farmers in the Lake Basin are engaged in subsistence agriculture, which is characterised by small land under cultivation and primitive farming technologies like hand hoe, shifting cultivation and limited use of inputs. Only a small proportion of the population, particularly those living close to the lake shores, are fully employed in the fishing industry. Therefore, agriculture also provides alternative and/or additional employment to fishing.

All over the Basin the area under cultivation is increasing at the expense of forest cover, wetlands and riverbanks, purposely to meet the increasing demand for food and cash. Cash crops are expanding at the expense of traditional food crops, creating disparities between different socio-economic groups. In many parts of the basin technical advice and innovations on soil fertility are either rudimentary or non-existent. In various lowland areas, off-season production cannot be undertaken due to inadequate irrigation facilities. Loss of traditional seed banking techniques affect farmers who cannot afford certified seeds. Women lack access to emerging technological innovations; yet they are most active in farming. Indigenous breeds characterise livestock production. Development of the sector is constrained by inadequate pastures, drought stress and expensive veterinary services. Farmers are reluctant to adopt improved breeds for fear of losses given the limited veterinary services. Technological innovations such as zero grazing are limited to a few farmers in the highlands.

### **Kenya**

As an alternative to fisheries, crop production (rain-fed and irrigation) is considered a viable option that can ease the insatiable demand on the lake resources. However, agricultural development is constrained by a series of factors including lack of capital, inappropriate agronomic skills and lack of appropriate land preparation equipment and implements as well as costly farming inputs (e.g. fertilisers and technology). Important commercial agricultural activities have included rice and sugarcane production. Maize production is the largest subsistence activity. Before the 1980s, rice irrigation schemes covered more than 2,400 hectares of land. Since then, however, there has been a decline due to marketing problems and co-operative management difficulties. The catchment areas

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<sup>11</sup> URT 1998, URT 1996; 1996a

of Uasin Gishu and Trans Nzoia districts have intensive production of maize, wheat, and dairy products.

Continuous mono cropping of cereals and sugar cane plantations has exhausted topsoil in the lower basin. In order to arrest the erosion problems, the government has been supporting control measures such as stone pitching and gabions for gully control. The need to promote such initiatives and introduce other complimentary measures has been expressed by farmers. Resources, however, have been limited, and attempts by donors such as SIDA, and Action-Aid to work with communities in promoting low cost control measures have only had isolated impacts. Also agro-forestry practices in the highlands can be questioned in terms of sustainable soil conservation.

Possible intervention mechanisms would entail an array of action points encompassing the formation of credit co-operatives for farmer groups to address the issue of costly agro-inputs, initiation of alternative income-generating activities by farmers, provision of extension services and participatory training on crop diseases control as well as improved crop husbandry. Other factors that require addressing are:

- The Nile Treaty and its restrictions on extraction of water from the Basin e.g. for irrigation schemes;
- Land tenure that restricts access to land by female farmers;
- Unwillingness by many farmers to invest in the sector.

Livestock production is an important source of livelihood and a critical enterprise with extensive potential in the Lake Basin area. However, potential gains are constrained by seasonal droughts and shortage of water for the animals and pastures, inadequate skills to improve livestock breeds especially in the dairy industry. Inadequate veterinary services have been held responsible for poor quality beef and low quantity of milk production. Suggested intervention measures include cattle dipping awareness campaigns, revitalisation of traditional livestock treatment techniques, promotion of sustainable water sources including small-scale water schemes and upgrading of community wells. Adoption of improved livestock breeds to attain higher levels of production by farmers should also be encouraged including zero-grazing practices.

### **Tanzania**

There are several farming systems in the Lake Basin influenced by agro-ecological zones determined by rainfall, temperature, geology, landscape, and population density. The crops grown include coffee, cotton, bananas, beans, paddy, finger millet, cotton, sugarcane and tea. Also livestock contributes a large share to the Basin's sources of livelihood. In Tanzania,

the Basin area is estimated to have a total of 4 million livestock (60.7 livestock per square kilometre). This includes cattle, donkeys, goats, sheep and chicken. Indigenous breeds characterises livestock production in the Basin where only about 28 thousands of cattle are said to be improved or exotic breeds.

In addition to land pressure, farmers use inferior agricultural technologies, they are faced with pests problem, soil exhaustion, soil degradation and inadequate extension services. Technical advice and innovations on soil fertility in the Basin are either rudimentary or non-existent. In various lowland areas, off-season production cannot be undertaken due to inadequate irrigation facilities. Loss of traditional seed banking techniques affect farmers who cannot afford to purchase certified seeds. On the other hand, development of the livestock sector is constrained by poor breed, inadequate grazing pastures, drought stresses and expensive veterinary services. Technological innovations such as zero grazing are limited to a few farmers in the highlands who keep dairy cattle. Farmers are reluctant to adopt improved breeds for fear of losses due to the limited feeds and veterinary services.

Low productivity coupled with the collapse of co-operative unions has affected farmers bargaining power, crop prices and incomes. Based on the 1991/92 producer prices, farmers in the mid 1970s to 1980s got better prices compared to the early 1990s. The latter is a period following market liberalisation, input subsidy removal and the collapse of co-operative unions. This suggest that if farm productivity, low farm prices will remain low invasion for more land will continue and at the expense of environmental degradation. This will result in unsustainable development and may exacerbate the problem of poverty in the Basin.

Economic activities based on the rich natural resources of the Lake Basin have, in one way or the other, effects on the ecosystem of the Basin and, subsequently, on the Lake itself. There are very close links between agricultural activity, population growth and income generation (poverty), quality of life and ecosystem health.

The rapid population growth in the Lake regions – over the years also combined with low prices on the major cash crops<sup>12</sup> – have put a heavy pressure on clearing new land for agricultural production. Land pressure is manifest in increasing deforestation, encroachment of natural, protected forests, clearing of bush and woodland and expansion of farming into marginal, less productive hill slopes vulnerable to soil erosion. Also

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<sup>12</sup> Based on 1991/92 producer price, farmers got better crop prices in the mid seventies and early eighties than during the early 1990s. Source: Regional profiles. Planning Commission, President's Office (Planning and Privatisation); 1996.

wetlands along rivers and the lakeshore, very rich in biodiversity, are increasingly under pressure for cultivation and livestock purposes. Land pressure combined with usage of inferior agricultural implements, outdated agricultural methods and inadequate extension services, lead to soil exhaustion and lower yields that undermine food security. Deforestation and reduced natural vegetation cover – e.g. Mwanza region has lost most of its tree cover – increase water runoff causing severe flooding and increased siltation of the Lake and the wetlands. A negative chain of impacts of this is reduced water quality in rivers and lakes and damaged fish spawning areas that, over time, may lead to reduced catches.

### **Uganda**

Uganda's economy is predominantly agricultural, with over 80% of the population depending directly or indirectly on agriculture production either as subsistence farmers (70%), semi-commercial (25%) or fully commercial farmers (5%). For more than 85% of the population living in rural areas, agriculture is the main way of making a living. Even within the Lake Basin, agriculture is the most important alternative economic activity for those involved in fishery and fish trading.

Agricultural output comes almost exclusively from small holders, 80% of whom have less than two hectares of land. The average household plot size for major seasonal crops is only 0.24 ha which is a typical characteristic of subsistence farming. Given the dependency on subsistence farming, food production accounts for over 65% of total agricultural production. In the FY 1999/ 2000 the share of agriculture to overall GDP was about 42%, 85% of export earnings and 80% of all employment. The sector also provides most of the raw materials to the mainly agro-based industrial sector.

Livestock constitutes an important sub-sector of the agricultural production activity in Uganda, contributing about 9% of total GDP. Indigenous breeds characterise livestock production. Development of the sector is constrained by inadequate pastures, drought stress and expensive veterinary services. Farmers are reluctant to adopt improved breeds for fear of losses given the limited veterinary services. Technological innovations such as zero grazing are limited to a few farmers in the highlands.

The main agricultural enterprises in the Lake Victoria basin include banana, maize, sugar cane coffee, small-holder rice schemes at swamp margins, ranching horticultural and floricultural crops. Although the climate of Lake Basin makes it suitable for agriculture with great potential for improvement both in terms of sustainability and production, the soils are degraded because of continuous cultivation of the same small plots

especially under the *maio* land tenure system. The majority of cultivators use simple tools and unsustainable, traditional methods. The sector is faced by a series of constraints spanning from lack of appropriate technologies and infrastructure, low skills and lack of training, lack of credit facilities, difficulties in acquiring raw materials and generally missing access to markets for the produce.

Women generally lack access to emerging technological innovations, yet they are most active in farming. This compromises their potential for productivity. While most men contribute to commercial farming, women contribute 90% to food production. Lately, liberalisation of marketing of agricultural produce has motivated farmers to increase production and improve quality of produce.

***Some important impacts on environment and quality of life***

In spite of the importance of agriculture in the basin, the greatest challenges facing development are socio-economic and ecological problems, which are mainly related to the inter-linkage between poverty and environmental degradation. A major contributing factor to poverty and environmental degradation is land shortage, in particular for smallholder farmers, leading to unsustainable cultivation of marginal and fragile areas such as natural forests and wetlands.

Land pressure is manifested in increasing deforestation, encroachment of natural, protected forests, clearing of bush woodlands and woodland and expansion of farming into marginal, less productive hill slopes vulnerable to soil erosion. Also wetlands along rivers and the lakeshores are increasingly under pressure for cultivation and livestock purposes. Land clearance for farm and livestock expansion has in many places reached a severe stage as evidenced by lack of land vegetation cover. Lack of the land cover not only renders the top soil potential for farming more vulnerable to erosion, but the eroded sediments are largely responsible for progressive siltation (sedimentation) of the Lake. It also reduces the replenishment of the aquifer causing the water table to drop leading to attendant problems of dry season water supply.

Although difficult to assess numerically the direct contribution from agriculture, livestock and forestry alone, it is evident that present agricultural expansion and practices contribute massively, both directly and indirectly, to soil erosion in the Lake Basin and siltation of the Lake. Destruction of the Basin's forests and wetlands to create areas for new cultivation and grazing has resulted in a situation where these areas can no longer perform their ecological and hydrological functions such as water purification, nutrient cycling, tapping of sediments, regulation of water flow, and conservation of biodiversity.



Soil exhaustion and lower yields undermine food security. The Lake Victoria Basin is the most populous region in East Africa. The rapid population growth (2.8%) over the years coupled with poor farming technologies have left farmers with the only option to expand their land under cultivation, creating heavy pressure on clearing new land for agricultural production.

**Consequences for specific stakeholders and vulnerable groups**

The expansion of agriculture in areas that were traditionally used for grazing purposes has led to serious land use conflicts especially between farmers and livestock keepers. The consequences of such conflicts are overgrazing in the reduced grazing areas leading to sheet and gully erosion. The Lake Basin economy is principally of an agricultural one. Agricultural growth and stabilisation of food production in the Basin will certainly improve people's living standards. Despite of growing importance of non-farm activity in the Basin (such as fishing and mining) the prosperity of a high proportion of the people in the Basin depends substantially on production and consumption linkages from farmers.

Regardless of the high potential for agricultural development, poverty remains massive. Poverty and environmental degradation are in many ways associated to land shortage particularly for small hold farmers in some parts of the basin. This is leading to desperate and unsustainable cultivation of marginal and fragile areas such as wetlands and hill slopes. There is general agreement that unsustainable consumption and production patterns are contributing to unsustainable use of natural resources, widespread poverty and environmental degradation.

The emerging trend of poor performance of the agricultural sector suggests that if no major changes are introduced to intensify and revamp the performance in agriculture, we should expect an even larger proportion of youth changing occupation from agriculture to fish industry or other non-farming activities. In particular, this will increase the migration pressure on the urban areas.

With increasing commercialisation in the agriculture sector women tend to lose control over resources, proceeds and household food. Whereas export promotion of non-traditional crops (such as beans, maize, peas, soy beans) is aimed at eventual improvement of the well being of the producers, it has nutritional repercussions at household level, especially for women and children. There is danger of food insecurity when food crops become cash crops, no longer stored for the next season but sold. Food may become more scarce and therefore expensive and less accessible to the poor. The need for cash, usually controlled by male family heads, which may be less inclined to convert cash into food,

threatens food security at household level. Commercialisation, where individuals can participate as out-growers for agro based industries leads to use of choicest land for such cash crops, leaving less productive land for food crops.

Most affected are HIV/AIDS households whose labour force and economic base to purchase required farm inputs have been weakened. The HIV/AIDS pandemic is having a negative impact on agricultural production. At a time when there is a desperate need for land, some farms are being abandoned or degraded to less labour-intensive crops as farming adults fall victim to the disease. The phenomenon illustrates the web of interactions that reinforce poverty, sickness, environmental degradation, desperate behaviour, and deteriorating quality of life.

The high population growth has significant impact on land pressure and its effects on the environmental situation. The driving forces of the rapid population growth are high fertility rate, marriage patterns, non-use of family control methods, as well as the influx of refugees and labour seeking migrants from neighbouring countries. With the natural environment in the Lake Victoria Basin already being in a precariously fragile condition, it is worth anticipating that the population dynamics and the migration patterns will aggravate environmental degradation with the possibility of cascading environmental effects. Mainstream thinking, as well as policies, has been to regard population increase as the major cause for degradation of natural resources. The major challenge has, therefore, traditionally been to encourage moderate population growth and a more balanced distribution of population by promoting secured and sustainable living conditions in the rural areas.

### **3.4 Forestry**

Four out of five people in the Lake Basin have their income from agricultural and forest sectors. The forests offer genetic resources and unique natural ecosystems and is habitat for wildlife, bee-keeping etc. Bio-energy is the main sources of fuel for rural population and accounts for the major part of the total energy consumption in the region.

In addition to their ecological and environmental function forests also play a crucial role in employment creation and direct support for livelihood. A large proportion of the rural population depends on forest resources to supply the needs for firewood and other forest products providing income, food security, and shelter. Forests and trees also represent important cultural and spiritual values that enhance social capital and the sense of well-being.

Lack of co-ordination among different institutions that have a stake in the forest sector has been a major problem in the management of forest resources. The responsibility for managing and conserving forests in each country is currently scattered amongst a variety of government institutions, often with overlapping mandates and competing interests.

### **Present situation, trends and driving forces**

#### **Kenya**

Continued degradation of Kenya's forest ecosystems has considerably undermined prospects for economic growth and socio-political stability. Sustainable environmental and resource management in the Lake Basin require that current and future forest practices be addressed. The overall picture is one of continued loss of forest ecosystem since the 1960s to pave way for agricultural activities and new settlements.

Forest trees are lost both at the farm level and in forest reserves, partly because of ineffective use of resources. Use of open fires, stoves and other inefficient cooking systems have been blamed for destruction of indigenous forests, as is the widespread burning of bricks. The situation calls for energy saving devices and promotion of alternative sources of energy such as solar and hydro-electricity that have potential in the Lake Basin. There is also need for pro-actively increase the role of the private sector in promotion of community forestry. Involvement of Webuye Pan Africa Paper Mills and Plywood Industries in Eldoret in funding forestry activities in the catchment areas is such cases at hand. Effective linkages and partnerships between social and public institutions are needed for turning around the present trends, i.e. in promotion of plantation forests and community forestry through combined agro-forestry systems. There is a need to adopt a more central role for local stakeholders in forest management and decision making. Although some promising impacts are reported on the ground<sup>13</sup>, more actors ought to be brought on board and support given to enhance development of suitable seeds and basic nursery techniques among farmers. Also, the cultural barriers that restrict women from planting certain tree species should be addressed, although a controversial issue.

#### **Tanzania**

It is estimated that the forestry sector contributes between 2.3% and 10% of the country's registered exports. This contribution is probably underestimated because of the unrecorded consumption of wood fuels,

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<sup>13</sup> For example the SIDA supported forestation project "VI-skogen" ("WE forest"), see chapter 11.

bee products, catchment and environmental values and other forest products.

There are about 52 forest reserves around the Lake Victoria Basin. Kagera region is fairly well endowed with natural forests covering 51.5 % of the region's total area (URT, 1996). Most of this is dense forest, open forests or shrubs. In Mara about 1,550, 900 ha are under forest while in Mwanza only 0.68% of the regional land is forest. Most of the Mwanza region forest is woodlands, wooded grassland and bush lands. Natural forests in the Lake Basin are threatened by the expansion of settlements, forest fires, mining activities, over-grazing, illegal harvesting and demand for agricultural land. Petty trading, which involves activities such as charcoal making and firewood collection, brick and pot making as well as local brewing, consumes massive quantity of wood. Carpentry and harvest of forest for building and other construction materials is visibly causing forest degradation in the Basin. The influx of refugees in the Basin has aggravated the situation particularly in areas around the camps. In Kagera region alone it is estimated that about 3.5 million cubic meters of fuel wood were harvested for domestic energy purposes in 1998. This is an average of 2 cubic meters per capita per annum for the region. Unsustainable forest utilisation has contributed significantly to the alteration of the natural vegetation cover in the Lake Basin.

### ***Uganda***

Forests and woodland cover about 24% of the total land area in Uganda. The vast majority of this is savannah woodland, while the remainder is natural tropical high forests and forest plantations. The natural tropical forests occur mainly in the western part of the country, around Lake Victoria and on mount Elgon, while the savannah woodlands are concentrated in the north, north-west and eastern part of the country. The natural tropical forests are found on protected reserves under both public and private ownership. The natural forests supply the bulk of the forest products but industrial plantations of both hardwood and softwood species are gaining prominence to match future demand for timber, poles and firewood.

In terms of its economic importance the forest sector is difficult to characterise as much of the output remains unrecorded and goes to meet subsistence consumption and the basic needs of rural populations. Forest produce is also often traded informally and illegally. Although vital to climatic and ecological balance, in watershed management and to control soil erosion, it is difficult to estimate the services of forests in monetary terms. As biomass forests play an important role in the economy of energy, accounting for more than 90% of the national total energy needs,

five times the value of petroleum and electricity<sup>14</sup> consumed by the country's industrial sector. In fact, the present rate of consumption is estimated to be considerably above the sustainable yield.<sup>15</sup> External trade in forest products is negligible.

In spite of the perceived environmental, economic and socio-cultural importance of the forestry resource base, there has been a marked decline and degradation in forest resources and a total loss of forest cover. In the government forest reserves the loss has been 35%. This gives, however, not a true picture taking into consideration that 70% of Uganda's natural forest and woodland cover is on private land, which is not regulated. The driving forces responsible for the decline in the forest resource base are clearing of forests for agriculture and cattle grazing, commercial charcoal production and over-harvesting partly due to weak regulation and illegal timber trade.

The significant population growth and in-migration cause increased demand for land, lead to encroachment on forest reserves, and increased demand for construction timber and wood energy. Many urban and peri-urban reserves are under threat of being degazetted to give room for the increasing demand for industrial land. In several recent cases forests conservation has lost out to economic interests.<sup>16</sup>

Lack of appropriate funding to attract private investors into tree planting is a threat to sustainable forest management. Loans from financial institutions in Uganda to the forest sector have mainly gone to wood processing enterprises, with practically none into forest management or afforestation projects. Formal financial institutions are wary of lending for long term forestry investments like tree planting. The current timber pricing mechanism, grossly undervaluing the forest resource, is discouraging conservation as well as long-term private investments into the sector.

### **Some important impacts on environment and quality of life**

If not properly addressed as a problem of common resources, the ongoing degradation and decline of the forests resource will have serious negative environmental and socio-economic impacts, which, in the short run, will affect the rural population and the poor. Reduced tree cover will increase water run-off, destabilise the groundwater level and increase soil erosion, all factors likely to reduce biodiversity and agricultural output.

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<sup>14</sup> Only 5% of the population has access to grid-based electricity, while less than 1.0% of the rural population has access (MFPE, 2001).

<sup>15</sup> Estimates indicate as much as 17% (Source: Republic of Uganda, 1999).

<sup>16</sup> *New Vision* (newspaper): Articles of Nov 29, 2001; Dec 31, 2001; Mar 21, 2002; Oct 4, 2002.

Natural vegetation cover is rapidly being degraded from the “*cultivation steppe*” in the Basin area. In the eastern parts of the Basin there is evidence of ongoing deforestation and in the highly deforested districts like Kwimba, Magu, Misungwi and Musoma Rural, land lacks vegetation cover and therefore vulnerable to water and wind erosion. Charcoal production has been particularly destructive along the Kahama-Ngara highway where large areas previously covered with closed Miombo woodland is actively being turned into shrub land.

There have been initiatives for afforestation/reforestation of the basin, but yet not yielded the desired results. Although recent studies show individual seedling nurseries to be the cheapest when compared with commercial group nurseries and central nursery, there are no incentives for individual farmers to engage in nursery establishment because trees take long to mature. As a result, farmers continue to encroach forest reserves and unprotected forests for wood products, causing removal of large amount of forest biomass. While in Kagera region, district councils, villages, NGOs, and CBOs have been central in initiating and managing alternative forest reserves, sources of energy and construction materials the actual outcomes of these efforts are not yet clear. Lake Victoria Environment Management Project (LVEMP) is undertaking a catchment afforestation where 144.6 ha of degraded central forest reserves have been replanted. However, accurate and up-to-date information on afforestation, standing volume and increment of natural forests is lacking. The information on afforestation is only available for a few locations and a few tree species making it difficult to generalise the impact of afforestation in the Lake Basin.

### **Consequences for specific stakeholders and vulnerable groups**

Agricultural sustainability in the Basin depends very much on ecosystem health and sustainable natural resource utilisation. Uncontrolled cutting of forests has affected soils for agriculture, which have degraded land more or less severely through soil erosion, nutrient depletion, decline in agrobiodiversity and increased disease and pests. The end result is the reduced income from farming communities.

While there have been efforts for afforestation, some of these efforts have been disastrous to the environment, biodiversity composition and ecosystem health. Many trees (188) and herbaceous plants species (55) have been introduced in the basin for fruit production and ornamentation and several have become invasive. Some of the species, like *Lantana camara* as an ornamental plant, has become a weed and habitat for tsetse flies and has taken over the habitat of other indigenous shrubs. This is another problem created for foresters as well as livestock keepers.



Degradation of forests has affected the time and energy used by women to fetch firewood since forests close to residential areas have been cleared for settlements, farming or grazing pastures. Forests are source for goods needed for economic activities such as carpentry, building and construction materials, charcoal making, brick and pot making, and local brewing. The degradation of forest resources therefore has affected incomes for both suppliers and consumers of the forest resources. Unsustainable use of forests also affects biodiversity composition for scientific research medicine, ritual and cultural values.

### 3.5 Wildlife and Tourism

Although sustaining and protecting wildlife areas in the basin often creates conflicts with human growth and sprawl development, parks and reserves are home to a huge variety of mammals, reptiles and birds. Beside the intrinsic value in itself a rich wildlife is a huge resource for the tourism industry. This great potential, if used wisely, could have significant impact in local economy, food security and national economies. A rich and sustainable wildlife sector is crucial for future development of the tourism industry and thereby the society as a whole in the area.



Photo: By Tore Hagen. The region is world known for its wildlife.

## Present situation, trends and driving forces

### Kenya

East Africa is rich in wildlife diversity, most of which is found in natural forest and wetland areas of the Lake Basin. The wetlands harbour a high number of fish, birds, and other easily seen wildlife valued by tourists. Although protecting wildlife areas in the basin often creates conflicts with human settlements and economic activity, the parks and reserves in the Lake Basin are home to a variety of mammals, reptiles and birds. Besides the natural value itself, wildlife is important for future development of the tourism industry and its economic spin-off. Legal and illegal hunting and the encroachment of parks and reserves that occur at various places in the Lake Basin area will have impact on the amount and quality of wildlife and the basis for tourism industry.

Kenya is among the world's top 50 countries in terms of species richness and has one of the highest total numbers of mammal species in Africa. However, Kenya's rich biodiversity and wildlife are considered to be severely threatened due to widespread habitat loss and encroachment of natural forests and reserves. Recent analyses based on government survey data found that wildlife in the arid and semi-arid land areas (roughly 80% of Kenyan territory) has suffered distinct decline over the last 20 years.

Wildlife species in Kenya are important not only for their significance for global biodiversity. An estimated 7 percent of Kenya's territory has been set aside for national parks and reserves. However, undocumented estimates are that approximately 75 percent of the country's wildlife live outside of protected areas, and even wildlife within the protected areas are affected by incursion, drought, and weak institutional control. The protected areas and wildlife attract a considerable flow of tourists, of great importance for the Kenyan economy and revenues for both government and the private sector. Wildlife products have also been used for ceremonial purposes in many areas, and medicinal species are critical to traditional health systems, which predominate in most people's physical and spiritual lives<sup>17</sup>.

In 1996, tourism in Kenya generated 11 percent of GDP and 18 percent of total wage employment. Broadly, tourism consists of two primary types: Seaside vacations (largely for Europeans) and safaris based on wildlife, the latter giving by far the highest per tourist economic value. In addition the incomes are more widely distributed for the benefit of a greater number of Kenyans, as safari tourists generally are more mobile, on

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<sup>17</sup> USAID 2000. *Kenya Strategic Plan. Environmental Threats and Opportunities.*

average visiting two or three parks and protected areas. In recent years tourism has been negatively affected by long periods of bad weather, fears of conflicts, and perceived insecurity because of crime and tropical illnesses.

### **Tanzania**

The Lake regions in Tanzania possess a distinct and substantial wildlife potential. The big proportion of the Serengeti National Park is in Mara Region and it covers an area of 14, 763 sq. km. There is also Rubondo National Park in Mwanza Region. The Basin is also endowed with game reserves (e.g. Grumet, Ikorongo Burigi, Ibanda, Biharamulo, Rumanyika Masasi River and Nehwa Nkima), Game controlled areas (e.g. Speke Gulf) and Open areas (e.g. Isenye, Nata Sibora, Nyichoka, Nyamatoke). Wildlife such as elephant, reedbuck, topi, eland, waterbuck, hartebeest, zebra, dik dik, buffalo, bushbuck, roan antelope, giraffe, warthog, lion and hippo proliferates in the Lake Basin. Rare mountain gorillas can be found in Biharamulo. Despite the biological diversity, Lake Victoria Basin faces considerable degree of species endemic to the area that are currently under pressure.<sup>18</sup>

Wildlife is facing a problem of frequent invasion by people for hunting, farming, and human settlement. This is causing serious environmental degradation, game poaching and migration of some of the wildlife especially wildebeest, which are easily scared by people's presence. Poaching can be said to be the main problem facing wildlife in the Basin. Between 1990-1996 a total of 1238 poachers were netted in the Basin (URT 1998; 1996; 1996a) with high incidences in Mara followed by Kagera region. Also as a result of influx of refugees from Rwanda and Burundi poaching has increased dramatically especially in Kagera Region. Out of 382 poachers netted in the region during the period 1990 to 1996, eighty seven percent were non-Tanzanians (URT 1996). It is estimated that more than 200 million TSH worth of wildlife meat has been lost through poaching. Also due to reduced security in the region as well as rudimentary infrastructure, revenue from tourism and hunting has been curtailed.

Throughout the Lake Victoria Basin, wildlife numbers and diversity are declining in the face of increasing population, decreasing government budgets, competition for funding and rapidly rising human pressure for land, food, pastures and income. Unless these issues are addressed properly in policies, the wildlife availability in the Basin is in danger of depletion. In the process certain species especially the endemic ones may reach the level of extinction. A major threat to the wildlife is poaching and

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<sup>18</sup> URT 2002.

illegal hunting by the local communities and refugee alike. But also deep poverty in the Basin has a cause on wildlife invasion for food and other economic gain.

Tourism in Lake Victoria Basin is presently at a low level of development. Nevertheless, the sector contributes to economic and social growth and to resource conservation in the Basin. The Lake Victoria Basin has a variety of sites ideal for tourism attraction. These include the lake itself, the surrounding parks and reserves (e.g. Serengeti, Rubondo) and the diverse culture of various groups of inhabitants.

A wider range of wildlife can be viewed in the Basin including the endangered mountain gorillas in Kagera Region. Lake Victoria basin is also a place where the oldest recorded remains of hominids were discovered (e.g. Laletoli and Olduvai in Tanzania) and are increasingly being utilised as tourist attractions. Along the shores of Lake Victoria various attractive resorts and beaches, where tourists interested in leisure activities, including speed boating and scuba diving, find attraction. Given the rich variety of culture in the Basin, cultural oriented tourism can often be found (for example associated with the rich Wasukuma culture).

### **Uganda**

Uganda is endowed with a variety of natural and cultural resources and attractions, which form the basis for strong tourism development mainly centred on national parks, wildlife reserves and sanctuaries, forests and scenery of natural beauty. The period of anarchy during the Idi Amin regime had dramatic effects on wildlife and led to a near complete destruction of the tourism sector.<sup>19</sup> The tourism industry contributes marginally to GDP, ranging from 1.3% in 1992 to 1.7% in 1997. The numbers of annual leisure tourists visiting Uganda have not risen above 7,000 during the last decade. Still fragile, tourism is, however, now a reviving industry with potential to become one of the main sectors for creating employment, offering opportunities for investments and earning foreign exchange.

The Ugandan part of the Lake Basin is a locus for tourism activity. Hotels and beaches have been strategically established along the lakeshore. The lake itself and its surrounding rain forests invite bird watching, rafting, canoeing, sport fishing and various sporting activities. Tourism on the Ssesse Islands is gaining significance, attracting local and foreign tourists. Eco-tourism in Mpanga and Mabira forest has gained momentum with

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<sup>19</sup> Large mammals in national parks were targeted for game to near depletion; 95% of the large mammals were eradicated, including the white and black rhinos and the kudu. Also elephants were reduced significantly.

increasing numbers of visitors. Bwindi forest and its mountain gorillas, and Lake Mburo Park are key tourist destinations.

Poor infrastructure and communication systems, in addition to guaranteeing personal safety and security of persons and property, are major constraints to the development of the tourist sector. Past and recent cases of insecurity have resulted in a poor international image and a genuine reluctance on the part of international tour operators to promote Uganda as a key tourist destination.

Government tourism policies are yet to be fully formulated and tourism is in reality no priority sector in terms of government funding. Uganda Tourist Board, which is supposed to undertake marketing component, as well as other key public institutions addressing marketing, promotion and product development are still weak. Also the private sector is largely fragmented with low levels of professionalism, challenged by major financial problems and low profit margins. Corruption is another challenge.

Being cross sectoral, tourism is vulnerable to changes related sectors. Some of the economic development priorities affect the tourism sector and impact negatively on the environment. Mining and oil exploration in protected areas, logging and depletion of fishing resources are examples. Another is construction of hydropower dams. In the case of Bujagali fall on river Nile, activities such as sightseeing and white water surfing are likely to be negatively impacted by the construction of the new dam.

With progress in the economic sector and political stability, the central economic role of tourism is highlighted. According to the Tourism Master Plan, the government will emphasise private investment in the sector, including improvement of hotels to conform to international standards. Tourism and wildlife training institutes will be established, basic infrastructure improved as security measures stepped up. The plan will further the encouragement of local community participation in the management of protected areas.

### **Some important impacts on environment and quality of life**

Although the wildlife population is considerable in the Basin it is threatened by unsustainable utilisation. Parks and reserves suffer encroachment from agricultural development and livestock grazing, partly resulting from high population growth and increasing levels of poverty. Harvesting for commercial crafts and construction work contributes to deforestation of forests and wetland degradation. Hunting for subsistence is in some places prevalent leading to poaching and devastating bush fires. This is also the case with Game Reserves close to refugee camps (Tanzania). In response, anti poaching units have been strengthened and



communities are now, in some areas, involved in park management and revenue sharing.

Unless it is more widely recognised and accepted that wildlife can generate real economic and ecological benefits to local communities, to government and to the business community, the wildlife heritage in the Lake Victoria Basin is likely to decline further. Incentives need to be developed for wildlife conservation in the basin especially by the local communities. Earlier studies show that even when local people are concerned about resource degradation they are unlikely to protect the resources unless likely economic returns and/or other benefits are fairly attractive.

Despite the high potential of tourism in the basin, the sector is not yet exploited to significant levels. Thus, this opportunity is there and needs to be developed for the benefit of both the local and national economy. One of the reasons for the underdeveloped tourism in the Basin is poor infrastructure (including airports, roads and accommodation). Lack of well functioning tourism sector has narrowed economic diversification of the Basin such employment and incomes for a considerable number of people. This is likely to improve quality of life and reduce pressure on natural resources such as land for agriculture, fishing and mining. The high pressure on wildlife through mainly poaching and agriculture threatens the sustainability of the tourism sector currently and in future.

### **Consequences for specific stakeholders and vulnerable groups**

Wildlife provides livelihood for a considerable number of local communities in the Basin in terms of hunting and taxes. Unsustainable use of wildlife in the Basin will affect local economies and food security especially for poor and people in the marginal areas. Wildlife is also a source of income to the nation in terms of tourism, game viewing and hunting. Decline and disappearance of some of the species in the basin may also affect other sectors of the economy including scientific researches, medicine and cultural values.

One of the key problematic issues is the present trend of encroachment of nature reserves and national parks. Efforts to restore boundaries of protected areas and the resultant eviction of settlers, have affected significant numbers of people and are a sensitive political issue, with implications for both conservation and the survival of the actual population.

The consequences of underdeveloped tourism sector in the Basin is the limited local and national incomes in terms of tax collection; service provision and market access for farm and non-farm products. It has also a consequence on other sectors such as agricultural development as well as



pressure on land. Improved tourism sector could provide income to a considerable population in the Basin, which may reduce pressure on agricultural land, mining and fisheries.

### 3.6 Mining and Industries

Mining provides sustaining economic activity in areas where commercially valuable minerals are accessible. Mining is a growing economic sector and geological mapping reveals a wide range of mineral deposits in various parts of the Lake Basin, including limestone, volcanic ash, limonite, iron, gold and diamonds. However, large-scale mining requires further studies and exploration to be carried out. The technologies in use are generally basic, tend to be relatively inefficient and have wide-ranging effects on the environment. Mining attracts migrant workers with no access to agricultural land that would otherwise enable them to be farmers.

#### **Present situation, trends and driving forces**

Mining exploration and prospecting is going on in the entire Basin by national and international mining companies. A substantial fraction of the Lake Basin local population is endowed in mining mostly as a complimentary activity. The scale of operation varies considerably from place to place. In general, there is lack of documentation on the extent of mining activities in the basin, basically due to lack of a regulatory framework. Sand and clay are extracted all over the Basin. A firm legal and regulatory framework to enforce sustainable exploitation of these resources is generally not in place.

#### **Kenya**

The Lake region is endowed with various industrial mineral deposits that support mining industry. In the 1950s areas such as Kakamega and Macalda attracted investment by commercial companies for gold mining. Due to limited stock, artisanal workers who consist mainly of the local populations dominate gold mining. The potential for mineral prospecting is high given the recent discovery of gold deposits in Kamagambo area of Homabay District.

The Lake region is a major source of sand mining that takes place a long plains and riverbeds. The Lakeshore Districts are therefore the source of sand that is used in the highland Districts. Brick making is becoming a lucrative activity both in the highlands and lowland areas using either mined clays or red soils. Over 50,000 people are employed in various small-scale mining-related and construction activities in the Lake region. A part from sand, the plains are also a source of mineral salts (locally called *bara*) that is mined for livestock use, complimenting commercial

livestock salts. These salts are also believed to be nutritious for human use.

Godwana and quaternary landscapes support rocks that are mined for building and construction. One important rock is the Tabaka and Sameta soapstones that is used for carving, and therefore provides employment to the local population and income to Gucha County council. Godwana landscape is also a source of high quality murram that is mined for construction.

The mining industry is fraught with a lot of problems. Although the government revised the Mining Act into the new Mining and Mineral in 2002, a number of questions still remain. Collections from mineral prospecting are not ploughed to support the local population affected by associated environmental degradation. Abandoned quarries are an environmental health hazard in many areas including Macalda mines. There is also need to address access to common minerals, as a way of reducing conflicts between interested parties.

### **Tanzania**

*Mining* exploration and prospecting in the Lake Basin area is undertaken by the local population, as well as by national and international mining companies. On the Tanzanian side the mineral availability in Kagera and Mara Regions has just started to be developed, but so far not in a large-scale exploration. In Mara an industrial mine is opened in Nyamongo In Kagera there are large deposits of nickel and cobalt which are explored for industrial scale mining. In Mwanza, particularly Geita District gold mining has been commercially important, since 1950s.

Prior to 1990s, mainly small-scale miners were undertaking mining activities and the contribution of mining sector to GDP was very low. The move taken by the Government early 1990 to allow the Bank of Tanzania (BOT) to buy gold directly from small miners improved tremendously the volume of gold sales and hence Government incomes. Government earning through BOT purchase has since declined as a result of the ongoing transition from mining by individuals to company mining.<sup>20</sup> In terms of the value of gold purchased by BOT from Mwanza region there is a decrease of about 99.6% between 1991 and 1996. Though it is very possible that the government earning in terms of taxation/royalties from the mining companies has increased, it is also very likely that the

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<sup>20</sup> As an example, in 1991 gold purchased by BOT from Mwanza region weighted 1.59 million grams valued TSH 5.1 Billion, while in 1996 the gold purchased was only 3,911 grams with a value of TSH 16 Million.

employment and earning of small scale miners has gone down as a result of the influx of mining companies.

During the last decade there have been drastic changes in the socio-economic policies of Tanzania. The Government of Tanzania has recognized the need to put into place an internationally competitive investment environment for the mineral sector. It is envisaged that the mineral sector should contribute significantly towards industrial development, employment creation, social and economic infrastructure development (particularly for the rural areas); income generation, foreign exchange earning and government revenue. As a result of liberalization of the economy, the mineral sector has experienced an exploration boom. To-date some world class mines have been opened and are already producing while others are in the construction phase.

Developments in the mining sector and the ongoing mineral exploration programs in the country have shown great potential to become the key-driving engines of Tanzania's economy. Tanzania's mining sector currently contributes over 3% of GDP and more than 10% of total exports. Besides contributing substantially to government revenue through taxes (such as income tax, royalty and withholding taxes on dividends) and indirect taxes, the mines have other social economic benefits like improved infrastructure, schools, health services as well as employment opportunities.

However, the above benefits notwithstanding, all mineral sector activities are to be carried out on the basis of safe and environmentally sound practices (for sustainability). The vision is for the mining sector to have a strong, vibrant and well-organized private, large and small-scale, mining industry conducted in a safe and environmentally sound manner and contributing in excess of 10% of the GDP in the next 25 years."

*Industrial activities* in the lake regions are small or medium sized industries based on agricultural inputs like vegetable oil mills, animal feed mills, cassava starch processing, coffee and tea processing. Also fruit canning, meat processing, dairy products, fish processing, and beer brewing are present. Other industries include textile mills and manufacturing of farm tools and equipment.

The general observation is that industrial growth has been slow and many of the industries have not been doing well. Whereas some of these industries were initially owned by government parastatals, the current trend is to privatise them. The privatisation drive has also taken slow pace after its start in the 1990s, new investments have been slow to come by.

There is wide scope for potential investors to invest in agro- industries for processing of agricultural and livestock products. It is through industrial development in the Lake basin, that the ever-increasing number of unemployed youths in the region could gain employment opportunities in the future. The existing industrial establishments so far have not significantly solved the problem. It is thought that bottlenecks to industrial development in the Lake Basin do include poor supporting infrastructures and services. Strengthening of infrastructures and services such as energy and transportation systems could act as a catalyst necessary to speed up industrial development in the basin and hence increase of the employment opportunities.

### **Uganda**

Uganda is endowed with a variety of mineral resources including limestone, volcanic ash and limonite, all of which contributed over 90% of the total mineral production in 1999. Mineral production is still low to meet the local demand and investment in mineral exploration by the private sector is very minimal, allegedly due to unattractive investment conditions in the sector. Several international companies have shown interest in acquiring petroleum exploration rights in Semuliki Basin, Albert Basin and Pakwach Basin.

Presently, mining contributes only 1% to the GDP but has maintained a positive growth over the last years. With the exception of some large companies engaged in mining and mineral processing most mineral production in the county is carried out by small-scale operators and artisanal workers mostly engaged in mining of building sand, stones and clay. Silica sand extraction, used as the main raw material in glass manufacture, is taking place on the western coast of Lake Victoria covering part of the sandy soils of Masaka and Wakiso Districts.

The construction industry, mostly private, is heavily engaged in sand and clay extraction and stone quarrying. Activities are largely unmonitored and in the long run likely to be detrimental to the environment.

The industrial sector in Uganda is quite small. Since 1986 Government policy reforms have stimulated recovery and development of small, medium and large-scale enterprises through the private sector and other support groups who include farmers, business community, local communities and NGOs. Despite steady growth in the last ten years, the sector employs only 8% of the labour force. Most of the industries are located in the urban areas of the Lake regions. Though comparatively small in size, the sector is a source of relatively large revenue to government and contributes up to 16% of GDP.

The performance of the industrial sector, however, is relatively poor and the sector lacks international competitiveness, inter alia a reflection of the effects of worsening terms of trade. The manufacturing sector provides goods for the domestic market, but relies heavily on imported inputs. The depreciation of real exchange rates squeezes profitability in the sector.

### **Some important impacts on environment and quality of life**

Small-scale mining of gold in various locations has reported severe environmental impacts, because the demand for energy in processing and the huge amounts of timber are needed to reinforce mining ditches. Severe deforestation is reported in areas where small-scale mining is practised. In some cases huge mining pits are left unfilled and the top soil is covered with unproductive gravel and sub-soils leading to expanded sites for mosquitoes breeding, decline in agricultural productivity of the actual areas thus impacting negatively on the quality of life.

Mining of sand and clay has been reported to be a threat to the lake basin environment particularly due to lack of legal/regulatory framework to enforce sustainable exploitation of these resources. It is reported that uncontrolled extraction of clay and sand has resulted into large pits in most cases filled with water and thus provide breeding grounds for mosquitoes. Furthermore, the environmental degradation in these areas has led to the disappearance of the endemic monkey from the shorelines.

Water pollution in the Lake Basin has been linked to industrial discharges in the region. Some of the existing industries do not treat wastewater at all, whilst others have malfunctioning treatment facilities. Laws and regulations intended to control pollution are regularly outdated, their enforcement is weak and the penalties too small to act as an incentive for installing effective treatments systems. To minimise the impact of pollutants to the water, it is important that the governments' encouragement of industrial investments also take into consideration the need for more effective laws and regulations to ensure that environmental concerns and use of environmental friendly technologies are not compromised.

### **Consequences for specific stakeholders and vulnerable groups**

In some places conflicts have erupted between the mining companies and the local communities. Some small-scale miners have lost their mining plots to mining companies. This implies loss of employment. Many of the small scale-miners are not employable by the mining companies and cannot directly benefit from the created jobs.

The probable root causes might centre on the question of land rights, on environmental degradation, and differences in economic conditions

between the local communities and mining company staffs. On the positive side, booming of other business such as transportation and accommodation is a spin-off of huge investments in the Lake Basin. Improved infrastructure is also expected in the long run.

The privatisation of government owned industries has taken a very slow pace. Some factories have been idle for the last 10 years either because they cannot get a buyer or because the buyer could not operate them profitably. This has resulted in lay-off of labour and loss of employment opportunities in regions with initial high unemployment rate.

Pollution leading to biological contamination of fish from Lake Victoria led to the banning in 2000 of fish exportation to countries of the European Union, heavily affecting employment, foreign exchange earnings government income.



## 4 Technical Infrastructure and urban based economic activity

### 4.1 Overview of Lake Basin Infrastructure

The following Part gives a brief overview of the present status of technical infrastructure in the Lake Basin. The Part draws greatly on two recent EAC studies<sup>21</sup>:

- *“The Economic Potentials and Constraints for Developing Lake Victoria Basin as an Economic Zone”*
- *“Private Sector Development Strategy”* (First Final Draft)

We see no reason to repeat the studies in full length, but will present the basic findings and conclusions of the said studies to provide the necessary background the subsequent chapters on socio-demographic issues. Technical infrastructure is a precondition for socio-economic development. Not only is a well functioning, reliable and affordable technical infrastructure supporting machinery for economic development, but it is also a necessary prerequisite for social infrastructure to work satisfactorily and be able to reach out to the population.

#### **Transport infrastructure**

Road transport is the dominant mode of transport in the Lake Basin, accounting for an estimated 80% of all land transport. However, virtually all roads in the rural areas of the Basin are unpaved earth roads, the majority of which are in a poor state of repair making it difficult to access productive areas during the rainy season. Road maintenance carries a huge and increasing backlog, with largely irregular and limited spot improvements carried out on a had-hoc basis. Also vehicle overloading causes considerable damage to the road system. Food production and marketing are badly hit. The development of road infrastructure, including rehabilitation, maintenance and construction will be a major precondition for stimulating socio-economic development, trade and ease transport for the people of the Lake Basin.

Railways would provide an important mode of transport for the carriage of bulky goods over long distances, in particular between the East African ports of Mombasa and Dar es Salaam and the Lake Basin regions in all three countries. However, the railway infrastructure is far from satisfactory to serve this purpose due to poor management and lack of investment in

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<sup>21</sup> Chapter 3 and the Executive Summary of the first, Part 3.3 of the latter.

rehabilitation and upgrading of tracks, rolling stock and signal systems. All three countries are pursuing policies of privatising the rail transport sector. The railway systems of the three countries also operate water transport services on Lake Victoria. This includes wagon ferries, general cargo and passenger services. Along the Lake shoreline, water transport is the main mode of transport with a number of private boats serving the many smaller ports. Available capacity however, has been over stretched. The EAC states have signed an Inland Water Transport Agreement, when fully operational, will regulate and harmonise inland water transport on Lake Victoria.

International airports at Entebbe, Eldoret and Mwanza serve the Lake Basin. There are also airstrips accessible to light aircraft near other major towns in the Lake Basin. In particular the smaller, regional airports need upgrading and basic facilities to operate on a larger scale.

### **Telecommunication and information networks**

Telephone connections have increased greatly during the latest years. The number of public call boxes has increased, but in particular the use of card and mobile phones are rapidly increasing. Postal services have also registered impressive growth over the years. However, these services are primarily concentrated to the major towns, leaving rural areas outside district headquarters or major market centres with limited access to telephone facilities. Privatisation is an essential component in strategies to expand and upgrade telecommunications.

Geographic Information Systems (GIS) are generally not well developed, but all three countries have the capacity to provide data and information necessary for natural resources assessment and planning through remote sensing applications.

### **Water Supply and Sewage**

Water sources in the Lake Basin are surface water or underground water resources. Most of the surface water sources are to some degree polluted. As it was shown in Part 3.1 it is only in the major urban areas where water supply schemes provide safe and clean water for consumption. Protected point sources, including boreholes and protected springs, are generally fit for domestic use, but easily contaminated. Some boreholes also dry up during long dry seasons. Urban sewers and sewage treatment systems are generally in a bad condition and raw sewage is often disposed directly to open water. Rural areas, and also in some urban and peri-urban centres rely exclusively on pit latrines for human waste disposal, However, coverage is low, in some places of the Basin no more than 40 %.

## 4.2 Urban based economy and employment

There are several important urban centres in the Lake Victoria Basin region. The urban areas attract job seekers from other regions, leading to an influx of people and increasing demand for urban infrastructure. The annual population growth rate in some of the cities, like Kampala, is extremely high (above 8 %) essentially because of high in-migration. The urban areas provide employment opportunities in the formal sectors of the economy, but are particularly attractive because of the many options for informal and self-employment. The urban areas render a wide range of economic services that are critical to the development of the Lake Basin. These include transport, banking, telecommunications, and industry support activities.



Photo: By Tore Hagen. Mwanza in Tanzania, one of the economic and urban centers in the Lake Victoria basin.

### Present situation, trends and driving force

#### **Kenya**

Kenya's Lake Victoria basin is endowed with rich heritage of minerals, animals and plants that allow for a wide range of economic activities (1994). The economy is predominantly subsistence. Introduction of cash crops and industrial growth in the 1960s and 1970s led to a growing

economy dominated by the agriculture sector leading to increased employment and income. At the same time, the fishing industry registered a growing trend following introduction of the Nile perch, commercialisation of the sector and improved fishing technology. Since the 1980s, the economy has been on a collapsing trend due to bad governance and a policy environment that does not promote investment. The ailing economy is partly blamed on conditionalities of SAPs imposed by IMF and the World Bank.

Poorly conceived decentralization programmes show the agricultural sector collapse, with small-scale farmers hit hard (Kenya 1994, 1996). Poor pricing and corruption by marketing institutions and industrial policies that marginalized local investors show dominance of foreign companies in the commercial sector. The fish folks were, for instance, replaced by export fishing firms that employ high technologies. Women folks already in the business lost through reduced fish products and low markets due to lack of appropriate fish processing facilities.

Growth of the industrial sector in both urban and rural areas is affected by the collapse of the agricultural sector and poor physical facilities. Although Kenya's Lake Basin is best served with infrastructural systems compared to Tanzania and Uganda, there are some limitations. In the urban areas, poor infrastructural systems characterized by poor roads and poorly maintained telephone services have hampered the locally conceived jua kali sector. The latter has also been criticized for focusing more on men dominated activities through improved stalls and provision of loaning facilities.

Despite the various bottlenecks, the Lake Basin has enormous potential for industrial growth. Towns such as Kisumu, Homabay, Kericho, Kakamega and Webuye have food and service industries that provide income to close to 4 million inhabitants. Tea and sugar cane plantations are major sectors of rural employment in the Lake region.

Enforcement of laws and regulations against pollution is weak and penalties too small to act as an incentive for installing proper treatment facilities. Generally, the economy and employment rate in the industrial hubs of the Lake Basin is steadily growing, attracting job seekers from other regions, and a consequent increased demand on public services and resources. The region has also an active trade business sector. However, the high cost of credit facilities, competition from cheap imports and high transportation costs exacerbated by poor infrastructure partly hamper industry and trade.

Ineffective Local Government management of finances, poor planning and service delivery have compounded the current urban transport problems. Strategies for improving the overall Local Government management, focusing on improved financial management and improved systems for mobilisation of revenues, and management of infrastructure and service delivery, are underway<sup>22</sup>.

### **Tanzania**

In the urban centres industry, commerce and services generate a relatively small proportion of employment to the households in the Lake Victoria Basin, compared to the economic activities that are based on natural resources. Agriculture alone employs about 90 percent of the productive labour force in Kagera, 85 percent in Mwanza and 80 percent in Mara.

The urban centres, however, attract job seekers from other regions, leading to an influx of people and increasing demand for urban infrastructure. The urban areas provide a range of economic services that are critical to the development of the region. These include transport, banking, telecommunications, and industry support activities.

The industrial base of *Kagera* region is still very small, and the established industries vary from small-scale industries like sawmills, tailoring, marts, blacksmiths, brick making and flourmills, to more visible medium size units engaged in the processing of cash crops. A fish-filleting factory, previously processing 3-5 tons of fish a day and employing some 100 people, has stopped production because of over dependency of on the EU market.

For *Mwanza* the future industrial potential lies in production based on inputs from livestock husbandry, agriculture and fishing. Some significant advances have already been made. In 1996 there were about 90 major industrial establishment in the region, 73 of which in Mwanza town offering quite substantial employment opportunities. Had Mwanza Textile been operating, an additional estimated 3,000 people would have gained employment. The national policy of privatisation is gradually implemented. Mwanza Tanneries (now African Tanneries) has been privatised and Nyanza Glassworks is undergoing privatisation not still completed. Also other previously state owned industries are up for privatisation.

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<sup>22</sup> Government of Kenya. *Interim Poverty Reduction Strategy Paper* 2000-2003.





Photo: By Tore Hagen. The African Queen serves now as a hotel in Mwanza, and is part of the growing service industry.

*Mara* region is less industrially developed compared to Kagera and Mwanza (or Tanzania as a whole). In 1996, there were only ten companies of industrial importance in the region. Other small-scale industries throughout the region are mainly engaging in carpentry work, cereals milling and tailoring. Trading in gold was once an important urban economic activity for especially the youth population. However the withdrawal of the Bank of Tanzania from the purchase of gold has curbed the activities and contributed to the rise of unemployment.

Minor industrial establishments such as garages, repairs shops and carpentry workshops etc. are generally informal, not registered activities. They have access neither to government support nor to financial institutions and organised markets. Although small in size, they are many in numbers and should not be under-estimated in terms of their importance for self-employment and job opportunities for youth of various skills.

### **Uganda**

According to the population census of 1991, 11% of the population is urban with Kampala City alone accounting for 41% of the total urban population. The figures as of 2002 are, however, probably significantly higher as urban areas have faced high in-migration over the last decade.



Other major urban areas within the Lake Basin are Jinja, Masaka and Entebbe.

This urban population is dependent on both formal and informal economic activities. Formal urban-based economic activities are mainly concentrated in the industrial sector, which used to be the major employer of the urban dwellers prior to the Idi Amin regime. The political and economic disruptions of the last three decades have led to the collapse of formal sector employment. The situation has been exacerbated by the structural adjustment policies (SAPs) that, among other effects, have retrenched thousands of government employees. Unemployment and under-employment have forced people to engage in informal economic activities as a means of survival. The rapid growth of the urban population is undoubtedly in excess of possibilities for gainful employment, particularly for the unskilled rural-urban migrants who make up a major part of the urban poor engaged in informal micro enterprises.

Food processing is the largest industrial sector in terms of number of formal establishments. Although the government's privatisation policy is meant to revamp the economy, it is alleged that privatisation of major milling, tobacco and textile industries – which was intended to create jobs for the urban-based population – have instead resulted into local people being lay off and replaced by expatriate employees. However, the informal has only limited not had the capacity to take the massive entry of former factory workers and retrenched civil servants.

Trade and provision of a wide range of personal services, for the most part run by women, dominate the informal sector. The 1991 census revealed that nearly one forth of the households in Kampala was depending on trade as a principal source of livelihood. Migration of villagers into urban areas has led to a replication of village ways of life in urban areas. Urban farming is now a recognised form of agriculture, a small proportion of which is intended for sale in urban markets, the bulk intended for home consumption.

The rapid development of the informal economy is cited as a major challenge to the planning and administration of urban areas. One of the major constraints facing the informal sector activities is that they are grossly undervalued by the municipal council authorities leading to insufficient provision of infrastructure and utility services in most of the areas where informal sector activities take place.

**Some important impacts on economy, environment and quality of life**

The Lake basin urban areas typically include industries such as fish processing, sugar refining, tea processing, textile production, beer brewing and paper manufacturing. These are important sources of employment,

but also major sources of pollution that eventually flows into the lake. Additionally, there have emerged a number of heavy industries such as ginneries, sugar factories, tanneries, coffee cleaners and paper mills that are located along the rivers, resulting in serious pollution. While there are laws and regulations intended to control pollution, their enforcement is weak and the penalties are too small to act as an incentive for developing effective treatments.

Urbanisation and industrial growth are also contributing to changes in land use by putting pressure on open land and forests surrounding urban areas around the lake. Many urban and peri-urban reserves are under threat of being de-gazetted. E.g. in Uganda the increasing demand for industrial land has led to the de-gazetting of nearly 10,000 hectares, resulting in permanent reduction of the forest areas.

Urban-based economic activities, with a considerable contribution arising from the informal sector, have added on to unplanned housings (slums) with inadequate provision of basic technical infrastructure and social services in the major shoreline urban areas. These areas are more prone to health hazards such as diarrhoea, malaria, typhoid, cholera, and amoebiasis.

Despite the fact that the informal sector is a source of livelihood for many people, under-employment is a normal situation. Market saturation, stiff competition, and high costs of production inputs, limit the income potential of those involved in the informal economy. Poverty tends to lead to people adopting short-run survival strategies and lifestyles at the expense of long-term sustainable development.

As far as urban industrial sector development is concerned, there are several development opportunities in the urban areas of the Lake Basin, based on inputs from the surrounding regions. These include processing and manufacturing of agricultural products from local produce, as well as production based on fishing and livestock production. Development in the trade and industrial sectors is presently constrained by a number of factors including inadequate physical infrastructure and access to information technology as well as lack of entrepreneurship with sufficient managerial and technical skills. Laws and regulations for the industrial sector are generally outdated and the lack of capital in both public and private sector is made even worse by the reluctance from financial institutions to lend to small-scale businesses. Trade is suffering from barriers to the flow of commodities across borders due to bureaucracy and high non-tariff barriers. In recent years, transport on Lake Victoria has been severely affected by the growth of water hyacinth.

Without common basin-wide policies and regulations for the management of natural resources for industrial production, individual users often make decisions that degrade the overall endowment for other users. Given the resource constraints and population pressure, the desperation of poverty tends to lead to behaviour that increases poverty. The long-term objective of sustainability tends to be secondary to immediate survival. For instance, there have emerged a number of heavy industries such as ginneries, sugar factories, tanneries, coffee cleaners and paper mills that are located along the rivers, resulting in serious pollution. While there are laws and regulations intended to control pollution, their enforcement is weak and the penalties are too small to act as an incentive for developing effective treatments.

## 5 Social and Demographic Conditions

### 5.1 Poverty alleviation and employment generation

Then importance of addressing poverty and income generation

The Lake Victoria Basin resource potential is immense and has not been utilised to its full potential so as to enhance the quality of life in the region. Analysing and understanding poverty and income distribution is important because first and foremost over 70 % of the people living around the Lake Victoria basin fall in this group. Poverty itself has been seen to limit individuals, households and community capacity to cope with socio-economic and natural shocks. Consequently this state of affairs increases vulnerability. Weak capacity to cope with shocks limits the capacity to realise visions and strategies set. Poverty brings limitations to:

- People experience declining access to, ownership of, and declining quality of resources;
- Institutionalise settings which are sensitive to the poor, hence contributing to peoples vulnerability;
- Increasing capacity to diversify into cash income generation activities which could be invested back to strengthen major livelihood priorities as supplementary activities when major activities fail;
- Sustenance of traditional social 'safety nets' particularly due to falling economic standards and few remittances from dependants



Photo: By Grete Klavenes. Use and processing of Nile perch waste products near a fish factory in Kisumu. People are driven into this business due to lack of other fish resources.

### **Present situation, trends and driving forces**

With the implementation of Structural Adjustment Programmes (SAP) in the three countries, the population of the Lake Basin area was adversely affected. To handle the adverse effects of the SAPs, various programmes were initiated in the Partner States to address poverty. However, these programmes, although within the Lake Victoria Basin, lacked the regional co-ordination necessary to powerfully address the questions of poverty and economic development.

#### **Kenya**

The emergence of diseases such as malaria, tuberculosis and dysentery, and conditions such as HIV/AIDS in the Lake Victoria region has impacted greatly on the general socio-economic situation and development in the Basin. In particular HIV/AIDS has hit the productive age groups (15-49 years), leaving behind destitute orphans and the elderly. Available data indicates that the Lake Victoria Basin is some of the most severely affected by HIV/AIDS in the whole of East Africa.

Unless the current health situation is reversed, the quantity and quality of food available to households as well as the surplus meant to support off-farm sources of income will continue to dwindle. The vicious cycles of poverty and poor health will prevail and food insecurity will be exacerbated by the additional burden of caring for orphans and elderly. Household assets are reduced through the depletion of savings and forced disposal of land and livestock as an increasing amount of money goes into the purchase of drugs for the affected and in meeting other family obligations.

Labour sharing practices, which have been common in most communities to assist at peak labour periods such as harvesting, may break down due to shortage of labour. Agricultural knowledge, practices and skills – modern as well as indigenous – gained over many years of experience and essential to survival are lost. At the household level, present trends indicate loss of young adult on-and-off farm labour has reduced farm output. Projections by FAO suggest that between 1985 – 2020 the three East African countries might face a substantial reduction of their agricultural labour force as an effect of the HIV/AIDS pandemic alone<sup>23</sup>.

#### **Tanzania**

Policies to tackle poverty and other development problems have been pursued under different policy initiatives. Vision 2025 lays out long-term development goals and perspectives, against which a *National Poverty*

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<sup>23</sup> The projections are for Kenya 17%, Uganda 14% and Tanzania 13%, (Source: IFAD, 2001:6).

*Eradication Strategy* has been formulated. Tanzania Assistance Strategy (TAS) is the result of a mutually felt need by the government and its international partners for a comprehensive medium-term development agenda, against which ongoing activities and support can be regularly addressed and assessed.

The Poverty Reduction Strategy Paper (PRSP) focuses more directly on poverty alleviation. The strategy rests on three main considerations. First, the strategy is viewed as an instrument for channelling national efforts towards broadly agreed objectives and specific inputs and outputs. Secondly, it is an integral part of ongoing macro-economic and structural reforms supported by Tanzania's multilateral and bilateral partners. Thirdly, the strategy concentrates its efforts on reducing income poverty, improving human capabilities, survival and social well being, and limiting the vulnerability of the poor.

The PRSP centres on sustenance of macro-economic stability, rural sector development and export growth, and private sector development. For non-income poverty, the strategy aims at rehabilitating the existing service delivery facilities to raise the quality of services they offer, ensuring greater consistency of donor programmes with government priorities and allocation of more funds to these areas. The identified priority areas include education (notably at primary school level), health (primary health care), social well being (provision of a 'social safety net' to vulnerable groups), agriculture (research and extension), roads (in the rural areas), water, the judiciary, HIV/AIDS, and management of the environment.

Nevertheless, despite the sustained efforts to address the country's economic and social problems since the mid-1980s, poverty in the country remains pervasive and deep. As regards income poverty, this is largely a rural phenomenon with the poor being concentrated in subsistence agriculture. However, urban poverty is also widespread and increasing particularly among the young, the old and those are underemployed in the informal sector. Furthermore, there are large variations in poverty between regions. The larger households and women-headed households in particular tend to be poorer. Income poverty is largely attributed to worsening income inequality and a relatively low rate of economic growth. In the area of non-income poverty, the respective indicators including primary school gross enrolment, literacy, survival and nutrition levels, access to clean and safe drinking water, social well-being and vulnerability have generally deteriorated and require improvement.

### **Uganda**

The rapid population growth in Uganda (3,4 %) is the highest among the riparian countries. High fertility and slow job creation restrain the ability to



eradicate poverty without considerable dependency on foreign donor support. Despite the proportion of the population defined as poor has declined from 56% to 35% from 1991 to 2001, inequitable income distribution still applies and household incomes remain low. Regional inequalities have increased significantly with extreme poverty and insecurity in the North and Northeast regions of Uganda. These regions also have the highest population growth rates: 4.5% for Northern and 3.6% for Eastern, in comparison to 2.7% for Central. Urban poverty has increased partly due to the influx of rural urban migration resulting from insecurity and natural disasters. Among the three regions bordering the Lake, Eastern is the poorest and least served in terms of social and public services, infrastructure, access to natural resources and economic opportunities. Women and youth are disadvantaged in access and controlling resources and reveal higher levels of poverty even within households.

Poverty at household level is largely rural. Some of the key factors causing poverty are limited access to land and markets for agricultural produce. Insecurity across national and regional borders, heavy indebtedness, limited provision of social services and lack of commitment to more directly targeted implementation of anti-poverty policies add to the situation. Compared to their male counterparts female household heads face more problems regarding food security, quality of housing, and access to basic services. The use of natural resources, for instance, is gender biased, where women have rights to renewable use (plant crops, harvest leaves, firewood) while men have rights to consumptive use (harvest whole trees and to sell land). Poverty is most rampant among the least educated. The HIV/AIDS pandemic is also a main contributing factor to poverty through reduced productivity in agriculture, loss of income, exhaustion of private resources through spending on health care.

In the Kampala area, gross in-migration due to rural poverty and landlessness contributes to the expansion of slums, often in flood prone areas with major housing and sanitation problems (58% of the households in Kampala live in one-room dwellings). Regional inequalities could lead to increased migration into the Lake Basin area, which is more secure and developed, unless there are concerted efforts towards bringing about more equity in the distribution of opportunities and resources.

### **Some important impacts on environment and quality of life**

Poverty affects the quality of life in all senses. Poor people have higher levels of malnutrition, higher morbidity and mortality caused by communicable diseases and HIV/AIDS, with very strong impacts on children. Poverty and inequality hinders social economic development, reinforces crime and is a fertile ground for political unrest and civil strife. It

leads to heavy pressure on natural resources and to environmental degradation caused by the pressing needs for survival.

Poor people take risks even where there are restrictions. Examples are illegal charcoal burning, soil mining, encroachment of wetlands and forest reserve, and the use of poison in fishing. Poverty leads to lack of capacity/ability to utilise resources effectively and sustainably. The combination of the various dimensions of poverty also leads to situations of powerlessness, strengthened by limited formal education, limited awareness of rights, and the inability to influence or participate in making decisions on key issues that affect them.

Reducing and tackling poverty will greatly effect socio-economic development, environmental quality and population development:

- Decreasing income poverty caused by poor working tools and technology, non-availability of farm inputs, poor road infrastructure, limited access to markets, non-availability of credit, collapse of co-operatives, adverse climatic conditions, and absence of safety-nets to cope with weather-related short-term fluctuations in income;
- Decrease the effects of: Inca's to adequate education, including limited access to primary school education, poor quality, high dropout rates, high rates of illiteracy, and inhibiting effects of the cost-sharing mechanisms in education;
- In health, it includes reduction on a poor level of primary health education, weak services provision especially in the rural areas, and limited involvement of the poor in the design of health plans and programme;
- On governance, it includes overcoming limited transparency and accountability notably at lower levels of Government administration and inadequate financial support being provided for sectors that are deemed key in poverty reduction;
- On gender, social and cultural issues including gender discrimination especially in regard to customary ownership of property, participation in wage employment, and decision making at the national and household level are removed.

Poverty Eradication Strategies (PES) are policy instruments formulated to address these considerations. First, the PES is viewed as an instrument for channelling national efforts towards broadly agreed objectives and specific inputs and outputs. Secondly, it is an integral part of ongoing macro-economic and structural reforms supported by multilateral and bilateral partners. Thirdly, the strategies concentrate on efforts to reduce

income poverty, to improve human capabilities, survival and social well being, and limiting extreme vulnerability among the poor.

Using Tanzania as an example, the PES centres on sustenance of macro-economic stability, rural sector development and export growth, and private sector development. For non-income poverty, the strategy aims at rehabilitating the existing service delivery facilities to raise the quality of services they offer, ensuring greater consistency of donor programmes with government priorities and allocation of more funds to the areas. The identified priority areas include education (notably at primary school level), health (primary health care), social well being provision of safety nets to vulnerable groups, agriculture (research and extension), roads (in the rural areas), water, the judiciary, HIV/AIDS, and management of the environment. A number of specific poverty reduction interventions have been decided upon. They include abolition of primary school fees, encouraging communities and other stakeholders, and support for demand-driven skill development, directed at assisting vulnerable persons.

#### **Consequences for specific stakeholders and vulnerable groups**

Poverty has significant implications not only of economic development, but the whole spectrum of sustainable development. One aspect that is usually ignored is its implications for *governance* in terms of the direct bearing of poverty on social strife and civil unrest in the region, with consequences for whole populations. Poverty contains a series of vicious circles and self-reinforcing processes that sustain high excessive population growth, pressure on natural resources, environmental degradation and poor governance. At the same time the existence of poverty is indicative of the interrelated dimensions of a more sustainable development.

Women, especially female-headed household are particularly hit by poverty, in turn heavily affecting children. Especially girl children get less access to food and are more likely to be malnourished. Being patri-lineal communities, in cases of extreme scarcity boys are given priority over girls. The same applies to access to education.

Disabled persons are among the poorest. These constitute about 10% of the population. Disabled persons suffer from negative attitudes, often face direct discrimination and denial of basic necessities of life, including education and health care. Disabled women suffer double discrimination and are among the most vulnerable to HIV/AIDS. Other groups of the population most heavily affected by poverty are landless people and elderly with limited capacity to generate income, often left with dependants from family members hit by HIV/AIDS.

The Poverty Eradication Strategies include enhancement of public awareness about poverty, its causes, resources available to eradicate it, empowerment of all stakeholders with the knowledge, skills required to organise, assess and mobilise resources, and implement programmes for poverty eradication with greater effectiveness and efficiency. If poverty is eradicated, life expectancy will improve, nutrition related diseases will drop, literacy levels will increase and general welfare will improve. The improvements will lead to full utilisation of resources. To be successful, it must be accompanied by strategies to conserve resources and the environment. Resource degradation and environmental pollution are expected to decrease hence productivity and income levels will increase.

## 5.2 Population development

The process of development is significantly influenced by population trends and population factors, which in turn have a major impact on the attainment of overall development objectives. Population dynamics and the level of development in specific contexts, have implications for resource use and quality of life. The high population increase in the Lake Basin, alongside extreme poverty creates unsustainable resource use and extraction. Demographic characteristics and their future trends are challenges to the Basin's momentum for development. In a situation of rapidly growing population, the need to have a demographically 'healthy' population able to meet with future challenges in production, community development and the need to develop competence, institutional capacity and good governance is crucial.

The population of the Lake Victoria Basin is estimated at 24 million people, which approximately 30 % of the total population in the EAC partner states according to year 2000 figures. The basin population is growing by up to 3% per year in rural areas and more than 8% in some urban areas. The age working group (15-64years) constitutes between 40 and 50% of the total population, much of which is underemployed.

### **Present situation, trends and driving forces**

#### ***Kenya***

The highest population concentrations in the Kenyan part of the Lake Basin are found in urban lakeshore areas such as Kisumu. In the rural areas, the majority of the people live, the population density is among the highest in the world for rural areas. The overall fertility rate has dropped from 4.8 percent in 1998 to 3.5 in 2002, whereas mortality rate dropped from 75/1000 to 65/1000 in the same period. In the same period unemployment was reduced from 25 to 20 percent. In the recent years the

HIV/AIDS pandemic has completely changed population growth trends – leading to massive deaths across the region, but particularly among fisherfolks. The most severely affected group is the productive age bracket (14-40 years).

The majority of the population is poor. The 1997 Welfare Monitoring Survey indicated that the overall poverty for urban and rural areas reached 52%. Rural food poverty was 51%, while overall poverty reached 53% of the rural population. In urban areas, food poverty afflicted 38% and overall poverty 49% of the population. Historical estimates indicate that the number of poor has increased from 3.7 million in 1972-73 to 12.5 million in 1997. It is now estimated that this number has exceeded 15 million or more. Prevalence of poverty is highest in the North eastern (58%), Eastern (57%) and Coastal (55%) areas and lowest in Nyanza (42%) and Central (32%) areas of Kenya.<sup>24</sup>

Cultural norms and practices have obvious gender implications. Women count slightly over half of the population, but lack access to production resources and, in most communities, have no rights to land. Without title deeds or other property providing security, women can not obtain credit or secure bank loans. Unequal gender relations are generally entrenched in all sectors and generally to the disadvantage of women.

### **Tanzania**

Historically, population concentrated around the Lake because life was easier than in the hinterland. Soils were light enough to work by hand hoe, there was easy access to drinking water from the Lake and the main communication lines were by boat. The midlands were the last to be settled due to insecurity (wild life and clan warfare), absence of drinking water and the prevalence of heavy clay soils that require animals for traction.<sup>25</sup>

The Mwanza region has the highest population concentration of 2.6 million people compared to 1.9 million and 1.4 million for Kagera and Mara Regions, respectively. The annual population growth rate in the year 2000 is projected as high as 2.6 percent<sup>26</sup>. At present, the Lake regions are among the most populous regions in Tanzania. Mwanza, Shinyanga and Kagera regions were ranked first, second and third respectively in terms of population size in the 1988 population census. On the other hand, Mara

<sup>24</sup> Government of Kenya. 2000. Interim Poverty Reduction Strategy Paper 2000-2003.

<sup>25</sup> The Planning Commission cites Mara Regional Farmer Initiative Project, Volume I, FAO/IFAD - July 1995).

<sup>26</sup> It should, however, be noted that big urban centres experience higher annual growth rates, for instance, as high as 8 percent per annum for Mwanza. According to the UNCHS Habitat (1995), this is one of the highest growth rates in the world.

region was ranked one of the least populous regions in Tanzania.<sup>27</sup> Population growth is being driven by both natural increase and by in-migration. The migrants are coming from other parts of Tanzania and from war-torn neighbouring countries. The highest concentrations are found in lakeshore towns, but the population in rural areas is also growing rapidly.

It is estimated that the economically active population, (age group 15 – 64 years), in the three regions constituted 48% of the total population, with more than half of the labour force being female. The majority of these people are engaged in subsistence agriculture while a small proportion of the population, particularly those living close to the lake shore, are engaged in the fishing industry. The informal sector is also growing as an important source of employment.

### **Uganda**

Uganda has a situation of high prevalence of extreme poverty alongside high population increase. The fertility rate of about 7 children is among the highest even in developing countries. Contraceptive use is low despite increased awareness. The population growth rate has increased from 2.5% in 2000 to an astounding 3.4% in 2002; the population is projected to increase to more than 101 million in 50 years, unless there are serious interventions. The Ugandan Lake districts are amongst the most densely populated. Some of the fastest growing are: Kalangala, Wakiso and Kiboga in central Uganda, and Bugiri in the East. The basin is the most developed part of the country; its urban centres, existence of commercial plantations makes it a destination for migrant populations in search of employment and refuge. Civil wars, political insecurity in Uganda and the neighbouring countries have led to in- and out-migration. Main migration is to the central region, mainly in search for land, settlement or employment. Additionally, absence of infrastructure and employment opportunities, as well as food scarcity in some regions is driving the youth to urban areas. The densely populated districts of Kabale, Kisoro, Rukungiri, Mbale, Busia are the main sources of migrants. Within the basin, residential and regional variations exist. While urban areas, the central region have lower fertility rates, the Eastern Region has very high fertility rates.

High fertility is associated with high mortality rate (88/1000), low levels of education and poverty particularly on the part of women, high value attached to children as a way of perpetuating ones' name, and labour intensive sources of income. Contraceptive use prevalence at 23% is still low, lowest in the East (15%), despite high levels of awareness of contraception; hence, contributing to high fertility.

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<sup>27</sup> This is, however, due to Serengeti National Park occupying huge percentage of the region. About three-quarters of the Park lie in Mara region.



Poverty is an underlying factor not only for poor quality of life but high fertility too. Despite the decline from 56% to 35%, inequitable income distribution (on regional basis) still applies and household incomes for many remain low. While there has been a decline in total fertility rates in urban, central and western regions, the Eastern region which reveals increasing poverty, remains constant at 7.4.

### **Some important impacts on environment and quality of life**

Political turmoil and civil unrest in Great Lakes Region have significant impact on population in terms of increased land pressure and, consequently, environmental degradation. There is evidence of extensive tree cutting for building material and fuel wood or total deforestation in areas surrounding former refugee camps. The major environmental implications of this ecological change is the exposure of soil to water and wind erosion, lake siltation and subsequently pushing out the youth in the local communities to non farm economic activities including fishing, mining and commercial tree harvesting.

The majority of the people are quite poor. The percentages living on less than US \$1 per day are reported to be 51% in Tanzania, the Lake Basin not being an exception. The high level of poverty is attributed to the weak economic base, increasing population pressure on environmental resources, and the impact of HIV/AIDS — all linked directly, or indirectly, to current patterns of resource utilisation and management in the region. Given current resource utilisation, demographic, and economic trends, there is little basis for expectation that the situation will improve significantly.

High population growth through fertility and migration has implications for service delivery and resource conservation. The rapid population growth is not really matched with rapid socio-economic growth, making it difficult for government to meet its population's needs in the areas of health, education, agriculture, infrastructure, housing, water and sanitation, thus retarding socio-economic progress. In urban areas, migration due to economic pressure and landlessness contributes to the expansion of slums, often in wetland and flood prone areas with major housing and sanitation problems and exacerbating the burden of public service delivery.

The systems are already overwhelmed by increasing morbidity with the 'diseases of poverty', especially HIV/AIDS and its repercussions, plus poverty and inability to pay for services. Population increase would mean the following for service delivery:

- In the education sector, improving infrastructure and the quality of education will require massive investments in infrastructure, personnel and material inputs;
- In the health sector, the delivery to all of minimum quality health services will demand improved health infrastructure, personnel, facilities and equipment. These needs will be significantly undermined by rapid population growth, since resources required is not likely to match the demand;
- Increase in population will exacerbate poor housing conditions, water and sanitation services for the poor, which would in turn affect their health.
- In terms of employment, rapid population growth does not allow for savings and investment in industries that would provide the required jobs.
- Economic growth is undermined by high population growth. High fertility will constrain ability to eradicate poverty as planned in the Poverty Eradication Strategies.

### **Consequences for specific stakeholders and vulnerable groups**

There is general agreement that unsustainable consumption and production patterns are contributing to unsustainable use of natural resources and environmental degradation. This is true in regions where emphatic and appropriate conservation measures are not instituted. With the state of natural environment in Lake Victoria Basin already being critical it is worth anticipating that the population dynamics and the migration patterns will lead to accelerated environmental degradation. A major challenge for the Lake Basin, therefore, is to achieve a more moderate population growth rate and a fairly balanced distribution of population by improving living conditions in both the major sending and receiving areas. This view represents mainstream thinking where population increase leads to degradation of resources. However, it should also be seen as an effect of resource degradation and reduced access to Lake Basin resources, e.g. because of commercial, expert oriented fishing. The problem is therefore not only one of poverty and population growth but also one of the politics of resource management.

In recent years HIV/AIDS has had a devastating impact on the residents of the Lake Basin. It has hit hardest in the productive age bracket (14-40 years), especially among fisher-folk. There has been a major increase in the number of orphaned households, with an accompanying increase in the school dropout rate and food insecurity.

Apart from the poor, women as well as children, owing to their marginalized positions in society, are disproportionately affected by

negative consequences of population increase. Unless affirmative action is accompanied by resource commitment and monitoring, in the face of resource scarcity, women and children are likely to have less access to resources and services. Whereas population increase facilitates availability of cheap labour to industry, and provides markets for products, assuming that people will have the ability to pay, the resultant poverty, may also lead to crime and insecurity that could scare off investors. This affects economic development and the countries' capacity to address employment and poverty issues.

### **5.3 Health and social services**

Living conditions vary greatly across the Lake Victoria Basin. More than 50 % of the population in the EAC countries have an income below the UN poverty line of 1 USD a day. The capacity of human beings to cope with social and economic life is central to the concept of sustainable development. The existence of primary health facilities – curative as well as preventive – is a core factor to combat poverty. Bad human health is a threat to productive capacity as well as to individual well being.

Across Lake Victoria Basin the HIV/AIDS endemic, tuberculosis and malaria constitute major hazards to human health. The three diseases contribute dramatically to the present rising death toll among the Lake Basin population. Loss of productive manpower, human skill and social competence are strong drivers of vicious circles that undermine development and foster poverty. There is a growing understanding that the prevalence of HIV/AIDS, tuberculosis and malaria is strongly interconnected and mutually reinforcing. In most parts of the Lake Basin access to health facilities such as hospitals and dispensaries is limited, unevenly distributed and in number barely keeping pace with the population increase. The situation is particularly critical in the rural areas and in isolated fishing villages where health facilities often have neither drugs nor qualified personnel. Preventive measures have been provided with regards to polio vaccination, malaria and HIV/AIDS protection.

Nutritional status is indicative of both health and wealth. It is associated with food intake, the mothers' awareness of the importance of proper nutrition, good sanitary conditions, and access to health care. Thus, nutritional status is not only an indicator of quality of life, but also a prime indicator of socio-economic development. The availability of food, e.g. the balance between production for the market and subsistence, culturally based eating habits, low incomes, large family sizes, low levels of education and limited awareness, especially of mothers, are all factors influencing the nutritional status. Also the high prevalence of HIV/AIDS

and its consequences has huge negative impacts on the nutritional situation.

Technical and social infrastructure is interlinked. Effective technical infrastructure is a crucial precondition for social infrastructure to work properly. Both types of infrastructure face critical limitations in most parts of the Lake Basin. Roads serve most of the area, but many have only minimal maintenance. Telecommunication facilities such as telephone, fax and Internet connections tend to be available only in the urban areas. It has been difficult for the municipalities to keep up with the growing population's need for basic urban services such as water supply, garbage collection, and sewage disposal. These public services are extremely limited in the rural areas. Most electric energy in the region is derived from hydropower, and development of new capacity is not keeping up with the growing demand. There is a critical shortage of clean and safe drinking water. The deterioration of water supply systems in strong need of maintenance as well as the increasing pollution of rivers and streams has left many communities with unreliable and unsafe water.

#### **Present situation, trends and driving forces**

Malaria is by far the most frequent illness and cause of mortality in the Basin, and rages largely unchecked. The long and hot wet season makes the Basin area an ideal breeding ground for malaria-carrying mosquitoes. The problem is exacerbated by the impact of urban growth into new areas without adequate public health measures. After malaria, HIV/AIDS is the next most frequent serious health problem.

The prevalence of tuberculosis is on the increase through out the Lake Basin for the first time in many years. HIV accelerates the tuberculosis infection and affects the immune system in people that otherwise would not have developed active tuberculosis.<sup>28</sup> HIV/AIDS infected people are also more vulnerable to malaria. The prevention and cure of malaria and tuberculosis is, therefore, crucial also to keep the immediate death tolls of HIV/AIDS down.

Malnutrition is a major underlying cause of the high child mortality in the region.<sup>29</sup> Malnourished women face risks in delivery, sometimes causing maternal mortality, and are likely to have malnourished children. Malnourishment also leads to higher susceptibility to diseases, with children the most affected group.

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<sup>28</sup> For 40% of those registered as dying from HIV/AIDS, the real cause of death is tuberculosis (SIDA 2002).

<sup>29</sup> In Uganda it is estimated that malnutrition contributes to as much as 60% of the deaths

### **Kenya**

The emergence of various diseases such as malaria, tuberculosis and dysentery, and conditions such as HIV/AIDS has negatively impacted the health situation in the Kenyan part of the Lake Basin. In the Nyanza region of Kenya, HIV infection rates are reported to be around 30 percent and AIDS patients occupy 70 percent of hospital bed spaces. Though aware of the nature and impact of HIV/AIDS, the majority of people have yet to change behaviour and to overcome the social barriers that exist. Combined with poor funding of the health sector, limited access to health facilities, and the inability of families to pay for health services, leave the majority very vulnerable to the impacts of AIDS.

### **Tanzania**

In 1999 the health infrastructure in the three Lake regions consisted of 916 registered health facilities (dispensaries, health centres, and hospitals). This means that one health facility on the average serves more than 6000 persons. The facilities are unevenly distributed and a significant portion of the population resorts to health facilities for help only in emergencies at considerable cost and inconvenience.

Malaria, urinary tract infections, diarrhoea and clinical AIDS are the main diseases in the area. At present, the prevalence of the HIV virus among the adult population in Tanzania is 8 %, and probably still on the increase, as compared to 15 % in Kenya and 6 % in Uganda. In Tanzania an estimated 100 0000 people died from HIV/AIDS in 2000, of which approx. 19 000 reported for in the three Lake regions. The pandemic started in the Lake Basin as an urban phenomenon, but is now firmly embedded in the rural areas. Infection rates are highest along major transport routes, around trading centres and fish landing sites.

In the area of preventive services major achievements were recorded in polio vaccination following the implementation of the special WHO programme for eradication of polio by the year 2000. For malaria the measures include distribution of nets in hospitals and education campaigns. In the area of HIV/AIDS the strategies centre on educating the people in various ways of protecting themselves against infection.

Curative efforts focus on allocating more funds for procurement of medicines and hospital equipment. During 2000- 2001 the government continued to implement the health sector programmes taking into account the specific targets of the Poverty Reduction Strategy Paper (PRSP). Special attention was given to gender and vulnerable groups, including the poor in the rural areas. A health sector survey carried out in January 2001 revealed that per capita public health spending had increased to nearly 6 USD from 5.50 USD in 1999/2000.

### **Uganda**

Over the recent years significant progress has been registered in the health sector owing to a policy shift towards primary health care with emphasis on disease preventive measures and increased resource allocation to the sector. Physical access to health services has improved and a “minimum health package” is in place. In spite of this some health indicators show a decline between 1995 and 2000 and life expectancy has decreased from 48 years to 43. Health services are still inequitably distributed and the Lake region is relatively better served in terms of basic infrastructure and services, although with an urban bias. However, significant proportions of the populations have still limited access to proper care due to poor health seeking habits and limited ability to pay.

Malaria is most prevalent disease in the Lake Basin of Uganda region. The malaria situation is exacerbated by poor case management entailing widespread self-medication owing to low levels of awareness and limited economic access to proper health care. Urban sprawl into new areas without adequate public health services also add to this. Other diseases with increasing prevalence are acute respiratory infections, tuberculosis, intestinal worms, skin diseases and epidemics of cholera especially with the *el nino* rains.

After malaria, HIV/AIDS is the second most serious health problem both in urban and rural areas, in particular along major transport routes and around trading centres. Districts adjacent to the lake, above all the urban areas, are among the most affected. Although the overall gender gap is narrowing, women are more affected than men are<sup>30</sup>. The effects in terms of dependence are overwhelming. Uganda has the highest number of HIV/AIDS orphans in the world (over 1.7 million in 1999). Masaka and Rakai districts have been particularly hard hit; in Rakai about 30% of childbearing population is HIV/AIDS-infected, and approximately 18% of all children have lost at least one parent.

The main contributing factors for the spread of HIV/AIDS are the high value attached to children, cultural practices of widow inheritance, polygamy, and wife sharing as well as men’s general resistance to condom use. Risky sexual behaviour is widespread, especially in urban areas and in contexts of high mobility, anonymity, and the existence of extensive sex networks. High poverty levels and economic dependence, inadequate life and negotiation skills have made young girls and women in general most vulnerable.

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<sup>30</sup> Women between 15 and 19 years are six times more frequently infected than men in the same age group.



Uganda, however, has made significant progress in slowing the spread of HIV/AIDS. The prevalence rate has declined from 30% in 1991 to 6 % in 2000. This is attributed to a multi-sectoral approach and strong political commitment, taking an open approach. Intensive awareness raising as well as district and community led initiatives to combat HIV/AIDS have led to behavioural change. These interventions are reinforced by care and support programs, e.g. prevention of mother to child transmission.

Malnutrition, especially among children, is one of the top killers in Uganda. In regions adjacent to the lake, Eastern is the worst off with 14% malnourished, followed by Western with 8%. Both the Western and Central regions have registered increase in malnourishment. Some of the main contributing factors are poverty at household level, limited knowledge and awareness of proper nutrition, and the prevalence of HIV/AIDS. Stunting among children under five years is still high (around 40 %), especially in the rural areas and has declined only marginally during the 1990s.

#### **Some important impacts on environment and quality of life**

Severed health conditions, in particular in relation to deceases with a high death toll like HIV/AIDS, malaria and tuberculosis, do not only bring about direct suffering of individuals. If not curbed, they will also have significant short term and long term impacts on society at large, on state institutions and the affected households.

Over time the demographic structure of the population will change dramatically: First of all the life expectancy will drop remarkably. Orphans have become a significant part of the population, at present an estimated 2,5 million are orphaned in the Lake Basin. Poor populations are overwhelmed by needs to take care of orphans and the sick, especially affecting old caretakers, the majority of whom are impoverished.

Fewer children will survive their childhood and the productive work force will diminish due to deaths and increased absenteeism. Elderly people will loose their support as working family members disappear. In the end this will have effects on economic growth as well as on the competence and skill of the work force.

Public institutions, especially in the health sector, are strongly influenced by the heavy strain of the HIV/AIDS pandemic, malaria and tuberculosis on public finances. Patients suffering form HIV/AIDS are holding up an increasing number of hospital beds and medical and care capacity. The growing demands of the health sector to fight the death toll, have effect the financial allocations to other public sectors crucial to poverty alleviation

like education, water supply and agricultural extension services. Currently falling school enrolment rates, partly attributable to deaths and sickness among children, will be even more negatively effected by the financial strain on government budgets.

Traditional support systems are failing to cope with the ever-increasing HIV orphans. In the agriculture sector, morbidity and mortality due to AIDS has resulted in cultivation of less land; shifting to cultivation of less labour demanding food crops owing to time and resources spent on care and related social activities. Aside from the personal suffering and distress, households are strongly hit by the loss of their income earners, and as deaths occur, also the loss of savings to cover funerals and support destitute family members. Reduced incomes invariably the general situation of food supply and nutrition. Studies indicate that food consumption may drop as much as 15% in the most poor households with severely sick or dying adult members.

#### **Consequences for specific stakeholders and vulnerable groups**

Despite public awareness campaigns the disease continues to strike the poor who are put at risk by their economic circumstances. In particular the rural population is vulnerable to even small disruptions in food production and supply. The questions of health and nutrition are closely interlinked. Not only productive capacity, but also local knowledge and skills are lost as people die or leave the community.

The gender aspects of HIV/AIDS are obvious. Not only are women hard hit by the epidemic, but the burden of looking after and nursing the sick notoriously fall onto the women and add on to the demands for income earning, household work and child care. The vulnerability of sex workers is well known, but with declining catches in the artisanal fishery sector, it is reported that female fishmongers are increasingly asked to trade sexual favours for the opportunity to buy from the limited supply of available fish.

## **5.4 Education, training and research**

Education is a precursor to improvement in quality of life and sustainable development. Education has a bearing on awareness levels, access to information, with positive impacts on health, production, conservation and general well being of populations. A more educated population is likely to be more aware of environmental issues, or would be in a better position to receive awareness raising messages. The question of education addresses ignorance, lack of awareness and the sense of disempowerment, which affects effective participation of people in development processes, particularly in addressing poverty. More educated mothers have healthier children. It opens avenues for better incomes,

employment and better health. Education helps farmers become more productive.

Education and research is instrumental in generating economic growth apart from having intrinsic values and benefits in itself. Institutions of higher education are potential vehicles in providing necessary data and knowledge needed to formulate and operationalise sustainable development strategies for utilisation of Lake Basin resources.

### **Present situation, trends and driving forces**

Looking at the Lake Basin as a whole, a considerable amount of research programmes and projects have been undertaken on Lake Victoria and its catchment area over the years, the bulk of which have been donor supported (see chapter 11). The programmes have their specific historical background, geographical/regional location, and vary greatly in institutional structures and scientific focus. A common feature is that they seem to be considerably overlapping and scantily co-ordinated. Research activities have been undertaken at national level to address problems with obvious common, regional dimensions. Much research tends to be of a basic character, and, though numerous as they may be, have hardly had any effect on the development agenda of the Lake Basin. Most of the results and findings have hardly been shared outside academia, and with few tangible results directly assisting in easing the problems of the people in the Lake region (IUCEA 2002).

However, steps have been taken to establish possible funding and modalities of improved co-ordinating of research initiatives in the Lake Victoria region. The Inter-University Council for East Africa (IUCEA) has been mandated to spearhead regional research activities. Under the auspices of EAC and supported under the Lake Victoria Partnership the Lake Victoria Research Initiative has been established to in order to better co-ordinate national and regional research issues and priorities (see chapter 11). Other institutions that can compliment these efforts include the Lake Victoria Fisheries Research Project (LVFP) and the Lake Victoria Environmental Management Project (LVEMP).

### **Kenya**

After the high enrolments of the first two post- independence decades, there has been a reversal at all levels of education in Kenya, characterised by non-enrolment, high levels of dropouts, low completion rates (particularly among girls), and poor transition rates from one level of education to the next. This is attributed to the high costs of education and the burden of cost sharing that have had severe negative impacts on access to, equity and quality of education. Free education was a salient

issue in the latest election campaign, and the new Government has embarked upon a scheme of reintroducing free (basic) education.<sup>31</sup>

The new government is likely to overhaul the educational system. NGOs and development partners have launched plans to supplement local community efforts by providing basic teaching materials at primary school level. At the secondary level, more day schools are planned as well as the provision of science equipment and other support material.

The region has attained a fairly high level of primary school enrolment with rates ranging between 80-90%. There are however local disparities associated with poor management of education resources, employment opportunities in cash crop and fishing sectors, insecurity and cultural barriers that deny girls education. Primary school students form a great part of the labour force in the fishing industry contributing to the vicious cycle of illiteracy and poverty. The AIDS pandemic has also affected the education sector which has experienced a serious shortfall in the number of trained schoolteachers due to HIV/AIDS. Anecdotal reports suggest that the country is losing close to 1,300 teachers per month due to HIV/AIDS and most of these losses are experienced within the Lake region.

As girls are likely to be retained at home to nurse HIV/AIDS patients, there is bound to be disparity in the boys/girls ratio in school enrolment in favour of boys. Educational opportunities for marginal groups such as AIDS orphans, child workers, nomadic groups, rural poor and slum dwellers have been extremely limited for a long period of time and there are plans underway to enhance the opportunities for these groups.

### **Tanzania**

Education system in Tanzania has three levels

- Basic or first level education including pre-primary, primary and non-formal adult education
- Secondary or second level education which includes Ordinary (O) and Advanced (A) level secondary schooling;
- Tertiary or third level education including programmes and courses offered in non-higher and higher education institutions

Higher education is given at university or non-university level. Non-university institutions will normally offer up to three year courses leading to an Advanced Diploma while university courses will lead to a Bachelor's degree or above. The number of higher education institutions in the country has grown from one single institution at the time of independence

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<sup>31</sup> *East African*, January 13-19, 2003

to the present 28 institutions (9 universities, 6 of which are private<sup>32</sup>, 7 university colleges (5 private institutions) and 12 non-university institutions, all public). Many higher education institutions in Tanzania have been established after 1996 in response to the government's decision to liberalise the establishment, ownership and management of higher education institutions.

### **Uganda**

In Uganda, the Lake region has attained an encouraging level of primary school enrolment with rates ranging between 80-90%. The positive change is mainly attributed to implementation of Universal Primary Education (UPE, allowing 4 children per family, 2 of which should ideally be girls). Government plans to increase and maintain rates of transition from primary to technical and vocational education by ensuring adequate provision of technical and vocational schools to be done in collaboration with the private sector. There is an affirmative action provision of additional 1,5 points for female university entries to counter-balance cultural and social biases against girls.

There are, however, disparities associated with the differences in education resources, competing employment opportunities such as fishing (for boys), (insecurity) and cultural barriers that deny girls education. Despite these threats, however, gender differentials in school enrolment are presently not significant (particularly in the central region), and literacy levels are steadily increasing nation-wide. There are also recent interventions focussed on functional adult literacy, which also entail development of skills, under the Poverty Eradication Action Plan. Literacy levels are steadily increasing nation wide. However, adult and female literacy in Iganga/Mayuge is still low. The central districts of Masaka and Rakai are among the most poorly served in terms of pupils per teacher.

There is concern over UPE compromising the quality of output in terms of quality of students. Quality and sustainable results require substantial resource commitment. UPE has promise for attainment of higher literacy rates, and address the challenge of ignorance. However, the program is likely to stretch government resources. Presently, there is heavy reliance on donor funding.

School drop out is a key challenge to the sector. In the lake basin of Uganda, by 2000, the Eastern region had the highest levels of post primary dropout rates. Overall, the main reason for school drop out is the high costs especially of secondary education. Secondary education is yet

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<sup>32</sup> Including 2 private universities in a planning stage (in Tumani and Bukoba)

to be catered for. Although not very significant, fishing influence on school dropout is highest in the Eastern region.

### **Some important impacts on economy and quality of life**

HIV/AIDS has had its toll on education, affecting students, parents/guardians, teachers and policy makers. In addition to school dropout, other effects like absenteeism, orphans feeling despondent and financially deprived affect their performance.

The sector has challenges of ensuring access, while raising the quality of education; recruitment of qualified teachers and adequately paying them; and ensuring availability and access to text books. The challenge again is keeping enrolled children in schools, who are constrained by extra costs, provision of lunches.

Despite the achievements, the sector still faces diverse challenges: shortage of teachers and deterioration or lack of proper physical infrastructure (classrooms, textbooks, and learning materials). Teachers are poorly facilitated and many are untrained. Owing to low salaries, many teachers work in more than one school.

Despite policies and interventions to the contrary, more girls still drop out at upper primary levels and secondary levels due to early marriages, sexual harassment in schools, pregnancy and parental preference for boys' education, the demand for economic (boys inclusive) and domestic labour. The high cost of secondary education is the main cause of drop out.

### **Consequences for specific stakeholder groups**

Children of relatively well to do parents are being shifted out of government schools to private schools, a thriving business for entrepreneurial teachers. So, if quality is compromised, it will be the children of the poor to be affected. Hence the more need for sustainable political and resource commitment in education.

Owing to the high cost of education at secondary, university and tertiary level with limited government sponsorship, children of the poor are less likely to get admitted, given the fact that the quality of education they get is poorer. Children from poor families are additionally affected by a diversity of cultural and domestic related constraints that limit their performance. Education used to be the opportunity of the poor for upward social mobility. This hope has become an illusion, unless there are interventions at post primary levels. For the majority among the poor, the planned emphasis on increment and maintenance of rates of transition from



primary to technical and vocational education with emphasis on functional and marketable skills development is a viable alternative.

## **6 Governance, policies and institutions**

This Part provides a general framework for assessing institutions related to resource management and other human-nature interactions on Lake Victoria. The development of institutions and policies for the management of the Lake Victoria Basin has been uneven and frequently contradictory. While in some areas there is evidence of positive trends towards effective legislation, improved administration, broader participation, and balanced approaches to resource access, other sectors face lack of regulation and governance that have led to overexploitation and growing signs of resource exhaustion of Lake Basin resources.

Thus institutional frameworks affecting the Lake Basin ecosystems span multiple scales and dimensions. Institutions are directly involved in shaping the driving forces, management, policy-formulation and co-ordination of human impacts over the whole basin. At national level there are institutional issues broadly involving village- and ward level, district, provincial/regional, and national scales as well as commercial, subsistence, civic and regulatory interests. Transnational issues include institutional relations between the riparian countries, both in terms of policy harmonisation and institutional co-ordination as well as those stemming from specific downstream externalities like pollution or habitat and biodiversity loss. Other macro-level institutional issues relate to the perspectives, priorities and interventions of donor agencies and multilateral development organisations.

A number of institutional types, spanning from formal/ legal entities to informal and customary institutions, are nested along various scales of human activity that impact the Lake system:

- Governmental and administrative units at the provincial, national and regional levels
- Civil society groups such as NGOs, voluntary agencies and other associations
- Community based and informal associations (usually though not specifically local)
- Informal practices, customs, traditions and beliefs

The revival of the East African Community provides renewed opportunities for collective discussion, management and policy co-ordination across the three littoral countries. However, institutional means for guaranteeing effective basin-wide harmonisation or sustainability are as yet largely

untested. Steps are taken towards institutional, legal and policy harmonisation between the partner states<sup>33</sup>, although a greater part of such a framework still remains to be developed.

## 6.1 Legislative and institutional barriers to harmonisation and co-ordination of policies

The Tanzania Development Vision 2025 points at four main driving forces historically impeding sustainable socio-economic development:

- A high degree of donor dependency and lack of national ownership to the development agenda. Policy responses to changing conditions have been slow;
- A weak economy and low capacity for economic management including excessive use of central administrative and political control mechanisms;
- Failures in governance and organisation for development. Institutional and organisational structures have not been reviewed and reformed to cope with on-going changes and demands for broader participation.
- Ineffective implementation machinery, leaving plans and programs without effective mechanisms for implementation, monitoring and evaluation that give rise to erosion of public trust and confidence.

These are all known forces, and, in the broadest sense, they are all issues of governance.

Limited administrative capacity and financial constraints of central and local government alike are making local environmental, natural resources and land use planning and management particularly difficult. These are vital policy areas in poverty reduction as well as in increasing public awareness and participation in general. Policies and legislation for environmental and resources management, programs and objectives for poverty eradication (PRSP) and decentralisation (LGRP) are closely linked. This argues for harmonisation of policies and legislation. However, the making of policies often tends to outpace administrative capacity to implement and monitor them. It is, therefore, also essential to close the gap between making, implementing and enforcing policies.

### **Present situation, trends and driving forces**

Many barriers to a more sustainable environmental and socio-economic development in the Lake Victoria Basin are of an institutional nature and

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<sup>33</sup> "Institutional and legal arrangement for sustainable development of Lake Victoria Basin" Vol. I-III (EAC/SIDA 2001).

the result of lack of regional co-operation and harmonisation of policies and legal framework. Lake fisheries have faced national competition rather than joint management of declining resources. Uncontrolled, transboundary pollution, land degradation, high unemployment and the spread of HIV/AIDS threaten health, quality of life and food security in the Lake Basin. Although there are many signs of increased regional co-operation under the EAC umbrella, the costs of non co-operation in policy areas crucial to the sustainable development of Lake Basin will increasingly strain limited national budgets. A number of policy areas are indicated by EAC, as well as guiding principles for their harmonisation, inter alia:

- Although often limited in scope and range, as well as proven slow in implementation, global conventions, international treaties and regional agreements signed by the EAC countries, in particular the EAC Treaty, should form the background for harmonisation of laws and regulations.
- The harmonisation of policies, laws and regulations should be based on the principles of sustainable use and management of natural resources, prevention of environmental harmful impacts, good governance, gender equality and equitable distribution of opportunities and benefits.
- Environmental laws and regulations are regarded as a priority area to be harmonised, including policies and laws on resource management, environmental protection, agriculture, fisheries and procedures for resolution of disputes.

Present regional institutions or projects like Lake Victoria Fisheries Organisation (LVFO) and LVEMP either have a too narrow range and/or a limited mandate for transboundary action.

As a general observation the sectoral organisation of resource management compromises the synergy required for co-ordination of economic, social and conservation efforts in all three countries. Resource management in fisheries as well as the forest and agriculture sectors suffers from predominantly sectoral perspectives and approaches. Policies and legislation, e.g. covering the agriculture and forest sectors, are overlapping, leading to conflicting interests. In addition, resource management and development issues are also strongly influenced by international donor agencies and development organisations and international financial organisations. The involvement of the private (business) sector in natural resource management is primarily limited to extraction of resources and little to conservation. In the fisheries industry, economic-related policies generally have favour external investments. The legal framework often address key issues only partially and/or in a

fragmented way. E.g. the Kenyan Fisheries Act of 1991 is described as basically conservationist and does not tackle the pertinent issues of ownership, resource access and control as well as benefit sharing.

In Tanzania, most policy documents and legislation launched in the recent decade focus on sustainable development and participatory planning approaches; e.g. the Agricultural Sector Development Strategy (2001); the National Forest Policy (1998); the National Environmental Policy (1997); the National Conservation Strategy (1994) and the National Human Settlement Policy (2000).

What is, however, generally overlooked are the strong interlinkages of policy areas and the need for coherence and co-ordination of policies and implementation mechanisms across sectors and levels of government as well as including civil society organisations and stakeholders. Present policies and, in particular, the laws are typically addressing specific policy issues of specific sectors and generally weak on enforcement measures.

#### **Some important impacts on environment and quality of life**

The absence of harmonised policies and legislation impact most sectors of the economy as well as the efforts to address poverty and environment and resource degradation. Lack of harmonisation of legislation and institutional framework impede effective regional co-operation as well as national action.

For fisher-folk lack of harmonised, transboundary regulations are having a direct impact on their daily life. Unless common regulations to change present practices – i.e. transboundary fishing and fish trade; closed areas and seasons; fishing gears and methods; minimum landing size of fish; fish quality standards; etc. – their future common source of food and income is threatened. Unless new policies are effectively implemented, managed and enforced on-going trends cannot be turned.

The present speed of soil degradation and water pollution are other examples of pressing needs of harmonisation of environmental laws and regulations. E.g. while Uganda and Kenya has comprehensive environmental legislation, Tanzanian environmental and resource legislation remains fragmented into sectoral policies and legal framework on nature conservation, wildlife and tourism, national fisheries, agricultural development, land use, urban development etc. There is no overall legislation for Environmental Impact Assessment (EIA) of development plans and policies, meaning that most activities will not require that an EIA is undertaken.

In Tanzania, the Local Government Reform will require law harmonisation across the scale as the responsibility for most public service provision are to be transferred from central to local government. This implies that services provided by the private sector, NGOs and donors alike, will be supervised and co-ordinated at the local government level. Laws in need of harmonisation apply to a wide range of policy areas such as land use planning, water and sanitation, agricultural extension service, roads, environmental activities as well as the provision of education and health services.

### **Consequences for specific stakeholders and vulnerable groups**

For the future of the Lake Basin, the most interesting and challenging political discussion in the local council will be the way in which cross cutting social and environmental considerations are reflected in the council budgets and development plans.

## **6.2 Decentralisation and public participation**

Decentralisation is an important element to explore and analyse in the field of developing Lake Victoria vision and strategy for development. During the 1990s Uganda and Tanzania have embarked upon major structural and organisational reform programs aiming at decentralisation and devolution of power to local government authorities. These reforms – or as in the case of Kenya, lack of such – will have important impact for decentralised resource management and local empowerment in general. Such issues are crucial to the socio-economic development of the Lake Basin area in determining the future living conditions for its population. Decentralisation may create units at district and community levels, which will have direct power to interpret, develop and implement action plans. The strength, span of authority and capacity of such bodies therefore will have a direct effect on the success of realising the vision set and implementing its strategies.

### **Present situation, trends and driving forces**

#### **Kenya**

Contrary to Tanzania and Uganda, the issue of decentralisation and devolution of political power to locally elected local authorities has not been on the reform agenda in Kenya.

Although decentralisation and public sector reforms have been less focused, the Government has recognised that reforming the public service is central to reducing poverty and improve management of the country's resources. A leaner public service and greater involvement of local institutions, implementing well-defined core functions and utilising its



resources more productively, will be more capable to tackle the governance side of sustainable development.

Decentralisation and devolution of power have important implications in the realm of natural resources and environmental management. However, some ministries and departments with jurisdiction over valuable resources have been reluctant to redistribute responsibilities, authority, and power to sanction and facilitate policy making in issues of resource control. There is definitely a case to be made for cross-sectoral co-ordination of development activities between NGOs, government and other development agencies at the district and community level.

The 1989-1993 Development Plan noted that since NGOs had become increasingly involved in development activities, their efforts needed to be strengthened by the District Focus for Rural Development (DFRD). It was noted that, NGOs in collaboration with the District Development Community groups and local authorities would enhance the process of local participation in the development projects. The current development plan (1997-2001) however relegates the role of NGOs to arid and semi-arid areas, development of fishing infrastructure and development of technology culture only. It is apparent that the prominence that was previously given to NGOs in the context of DFRD in the earlier plan has been set aside.

Despite the provision in the NGOs' Regulations (1992) that there should be NGO sub-committees within the District Development Committees (DDCs), the NGO Board, after a familiarisation tour in a number of provinces looking at NGOs' work in 1994, noted that such sub-committees were non-existent. Within the wider context, the DDCs have lost credibility in local development. Due to structural and legal problems, they lack authority to enforce compliance from NGOs in development matters at the district level.<sup>34</sup>

### **Tanzania**

The Tanzanian local government system is based on political devolution and decentralisation of functions and finances within the framework of a unitary state. The Local Government Act of 1999 devolves power from central to local government leaving the latter in charge of all service delivery of its constituency. The process of devolving power is part of the Local Government Reform Programme (LGRP) which overall goal is to increase access to and improve the quality of public services provided through or facilitated by local authorities.

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<sup>34</sup> Kameri-Mbote. 2000. The Operational Environment and Constraints for NGO's in Kenya: Strategy for Good Policy and Practice. IELRC Working Paper No. 2000-2.

Local governments will be holistic, i.e. multi-sectoral, government units with a legal status (body corporate) operating on the basis of discretionary, but general powers under the legal framework constituted by the national legislation. Local governments have the responsibility for social development and public service provision within their jurisdiction, facilitation of maintenance of law and order and issues of national importance such as education, health, water, roads and agriculture. Local governments constitute a unitary governance system all over the country based on elected councils and committees and a professional administration.

Decentralisation of government in the future will include four main policy areas:

- Political decentralisation is devolution of powers and the setting of the rules for the councils, its standing committees and chairpersons. Political decentralisation would include the integration of the present centralised or de-concentrated service sectors into a holistic local government system installing councils as the most important local, political body within its jurisdiction.
- Political decentralisation implies the creation of real, multi-functional governments at the local level within the framework of the national legislation.
- Financial decentralisation is based on a definition of the principles of financial discretionary powers of local councils, i.e. powers to levy local taxes and the obligation of central government to supply local governments with adequate unconditional grants and other forms of grants. The principle also allows local councils to pass their own budgets reflecting their own priorities, as well as mandatory expenditure required for the attainment of national standards.
- It further assumes an inclusive approach whereby civil local government creates an enabling environment for civil societies to operate.

Elected district and urban councils will employ its own staff, collect its own revenue in addition to earmarked grants and block grants from Central Government. So far, block grants are only for non-salary expenditure. The block grant system is yet to make a large imprint on the district development planning, as the funds at present are negligible. Therefore, local authorities are still more or less completely dependent on Central Government for their funding. On the average, rural councils cover about 10% of their budget from own revenues, while urban councils are able to

cover 20% to cover recurrent expenditure.<sup>35</sup> The balance is covered by government grants, by and large earmarked for specific sectors like education, health and water. Funds for development are allocated from Central Government or – as is often the case – provided by various donors.

The case of the municipality of Mwanza may adequately represent other areas:

Mwanza Municipality is the second largest metropolitan centre in Tanzania after the city of Dar es Salaam and is strategically located off the southern shores of Lake Victoria. The Municipality covers a total area of 1324 square kilometres. Mwanza is also the largest industrial and commercial centre in the Lake Zone of Tanzania, with vital access by water, air, road and rail to other regions. Lake-steamer transport connects Mwanza Municipality has links to other towns in Kenya and Uganda. Rail, road transport and bus services link Mwanza with other national towns and neighbouring countries. It has an effective link by air, through international/regional routes to Entebbe in Uganda, Bujumbura, Kigali in Rwanda and Nairobi in Kenya. In addition to being a commercial centre, as mentioned above, Mwanza Municipality is the administrative headquarters of the Mwanza Region of Tanzania. It is from here that the Government business in the region, including the monitoring function over economic activities within the Region is conducted, that is, decentralised the city functions as a unit of government. It is the centre of the City Council, Mwanza Rural District Council and Regional centre.

### **Uganda**

Since 1997 Uganda is committed to political, administrative, and fiscal decentralisation and devolution. This entails devolving financial and personnel resources, as well as decision-making powers and administrative functions to elected local governments. Under the 1997 Local Government Act, districts are given considerable powers over both revenue collection and the management of their resources. In addition, districts are given powers to formulate their own bylaws with regard to regulation, control, management promotion and licensing, provided these do not in any way contradict national legislation. In spite of the good intentions of the decentralisation policy, districts and lower councils face problems of capacity both in terms of financial and human resources. Capacity building funded by various donors has been undertaken to facilitate district and local level governments to perform their roles.

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<sup>35</sup> In sheer numbers, revenue collection in Bukoba urban was 196 mill TSH, for Mwanza 1,7 bn TSH and for Musoma 176 mill TSH (Source: Local Government Reform Programme).

### **Impacts of decentralisation on socio-economic development, environment and resources management**

In Tanzania, the Local Government Act devolves power to lower levels (villages and wards). Although functional devolution is not yet fully developed, it aims at making the village level an important site for transparent and effective governance and public participation. This is part of the overall objective to enhance local natural resource management and support mobilisation for development and improvements of rural livelihoods.

However, as non-earmarked funds for local priorities are virtually non-existent, most development investments take place outside the district budgets, often financed by donors, NGOs and CSOs. This affects the sustainability and authenticity of participatory planning and community participation in decision-making as well as easily alienating democratically elected representatives.

As for the typical case of Mwanza, councils face a number of challenges in the execution of their functions. These include inadequate financial and other material resources as characterised by general lack of adequate social and public facilities and poor working facilities, leading to a lack of capacity for planning and execution of development project and programmes. These limitations, notwithstanding the kind assistance of NGOs, CBOs and other development partners, make it difficult for the council to meet the challenges regardless of political energy and willpower.

In Uganda, district councils are expected to assist government in environmental management through the protection of wetlands, lakeshores and streams. Councils are also expected to devolve certain powers to lower levels (councils), including the control of hunting and fishing, markets and landing sites. They may also prescribe fees, charges and fines. As a result districts have considerable potential to act on fisheries management matters. For example, in 1999, following widespread incidences of fish poisoning, several Ugandan districts bordering Lake Victoria unilaterally closed down fishing and subsequently resisted central government demands that the fisheries be re-opened.

An important tenet in the management of the fish-poisoning crisis was the formation of National Task Forces on the fish landing sites to control fish poisoning. Since the alleviation of the poisoning problem, these taskforces have become a permanent feature. Such trends provide plenty of scope for co-management where communities are involved in fisheries management, in particular through landing management committees (LMCs).

## 6.3 Gender issues in policy development and implementation

Sustainable development requires maximum and equitable participation of men and women in all spheres of development and also in sharing the benefits thereof. One of the critical areas of concern in assessing the economic potential and constraints of developing the Lake Victoria Basin is gender. Gender, as a cross cutting issue, is one of the key bases of marginalisation and exclusion. Gender is a critical area of concern in assessing the socio-economic potential and constraints of developing the lake Victoria Basin. While there have been efforts to redress gender imbalances through constitutional provisions and gender responsive policies, laying grounds towards gender equality, full implementation remains a challenge. This is mainly attributed to persistent cultural/religious attitudes and practices. Culture has significant influence on gender relations, roles, division of resources and sharing of benefits. These practically permeate all sectors and have influence on the quality of life, with implications for production, environmental and natural resource management.

While existing laws in various spheres may provide for equal rights and privileges to both men and women, their interpretation through common laws and social conventions often leads to difficulties and their being compromised. In Tanzania for example, while the Land Act of 1999 and the Village Land Act of 1999 enable women to enjoy equal rights with men in ownership of land, some traditional or cultural practices still deny women from owning land.

### **Present situation, trends and driving forces**

#### **Kenya**

HIV/AIDS has exacerbated the social, economic and cultural inequalities between women and men in the Lake region, as well as affected family structures – for instance accentuating the feminisation of poverty by increasing the number of poor female-headed households. Young widows head most of the affected families, with young children or grandmothers caring for their grand children. Like in many other parts of Africa, childcare is the responsibility of women among communities in the Lake Basin. For most women, their husbands have migrated in search of jobs into the cities.

As the incidence of HIV infection within the Lake area increases, more girls than boys have been withdrawn from school to provide nursing to the sick and also care for the young children. Women's economic dependence on men in marriage or in less formal commercial sexual relations are likely

to increase. Poorly educated women and unemployed women are unlikely to insist on safer sex from their partners or husbands even when the risks of HIV infection are apparent.

Women predominate in the artisanal fish trade on Lake Victoria where they comprise between 70% and 80% of fish workers. Most of these women are single, divorced, widowed or separated. The principal push factor into the fish trade is the need for cash. Despite the high level of participation, men control the fish trade. Women in the fish trade have traditionally been marginalized and their involvement limited to small scale activities, in particular the processing (smoking or drying) and marketing of native and less economically important species such as *dagaa*.

Low incomes from fish trade brought about by cultural stereotyping, which relegates the role of women into low status tasks, renders women more vulnerable to HIV infection. To support their limited incomes, many women in the fish industry resort to sex work. Studies show that male fishermen and female fish traders had a significantly higher risk of dying from AIDS than farmers.

### **Tanzania**

The population of the Tanzanian part of the Lake Basin Regions of Mwanza, Kagera and Mara is estimated at about 5.9 million with an annual growth rate of 2.8%. The male/female ratio is 49 percent male against 51 percent female.

While it is common to find women lagging behind men in education the situation looks different in the Lake Victoria regions. A comparison of primary school enrolment between 1985 to 1995 show no significant difference between boys and girls<sup>36</sup>. Also, both infant and under five mortality rate show a slightly higher number for male children than females (URT 1996). However, adult illiterate rate shows a slightly lower number for men than for women. Reasons for dropouts among girls include absenteeism, pregnancy, death, and marriage. An examination of secondary school enrolment shows that boys outnumbered girls both in public and private schools. This suggests that girls perform less good in Standard 7 exams compared with boys and/or that girls work more at home as well as the fact that many parents prefer to educate boys than girls as a result of cultural values put to boys in many African cultures.

About 85% of the total population of the Tanzania's Lake Basin live in rural areas of which 70% are female, full time smallholder farmers. This is partly

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<sup>36</sup> 50.6% and 49.9% girls of all pupils enrolled in Standard 1 in 1985 and 1995, respectively



because the high migration of men to urban centres in search of paid employment. While women carry out farming activities, they lack access to new technological innovations both for farm and non-farm activities. Women are also responsible for domestic related duties such as food utilisation, childcare, and home management, which naturally affect time and energy available for other economic activities. The majority of the female smallholders in the Basin are poor, and their dependence on subsistence farming makes them more vulnerable to poverty.

In order to alleviate poverty, women in the Lake area are involved in different income generating activities. Women are networked to soft loans and other credit facilities and a considerable number of women's groups for income generation is registered in the Basin area. In the fishing industry, women within and outside the Lake Basin are engaged in fish processing (smoking), marketing and fish trading, both as wholesalers and retailers. It is reported that women are now paddling in boats for fishing and selling their products. The number of women in fishing and other non-farm activities is likely to increase in future, given the declining incentives in agriculture due to low prices, lack of inputs and market access.

In the mining sector women are involved both as firms and as licensed individual owner operators. Women are also operating as brokers and marketers, most of them as informal operators without licences and engaged in buying and selling as well as brokering and providers of services in food provision and the processing of minerals. Women Miners Association (TAWOMA), which was formed and registered in 1997, has provided a collaborative framework for individual and group networking and advocacy. Its creation has also provided an opportunity for women miners to be recognised, networked and sensitised stakeholders on their problems, needs and economic opportunities. Nevertheless, women involvement in the mining industry is very low. This is partly because mining is a technical business and is capital intensive and partly because of low level of education and societal attitude towards mining (EAC Secretariat 2002).

### **Uganda**

The Government of Uganda has made strong commitments to a gender responsive development in the constitution of Uganda. The constitution provides for full and equal dignity of person for men and women including:

- The provision of opportunities and facilities necessary to enhance women's welfare and enable them realise their full potential and advancement by the state;
- State protection of women and their rights, taking into account their natural maternal function in society;

- The right to equal treatment with men, and that right shall include equal opportunities in political, economic and social activities;
- Without prejudice to affirmative action, women shall have affirmative action in redress cultural or historical created imbalances;
- Laws, cultures, customs or traditions which are against the dignity, welfare and interest of women or which undermine their status are prohibited by the constitution.

Even though significant progress has been made in addressing gender issues in favour of women, including affirmative action provided for in the constitution, the present situation shows that it is still some way to go to reach these goals. Women in the Lake Basin – as else where in Uganda – are consistently worse off in terms of wellbeing compared to men. They are faced with limited access to and control over resources, evidenced for instance, by higher illiteracy and poverty levels. Women contribute most of the labour especially in agriculture (80%) but control least of the land or proceeds. Women have limited access to credit, have low levels of education, limited marketable skills, and limited participation in formal employment, with low representation in decision making positions. Women face higher levels of poverty and poor health, including their children and younger women are also more susceptible to HIV/AIDS infection than their male counterparts. Some of the cultural practices affecting women in Uganda are forced, sometimes adolescent marriages, bride price (if restrictive), polygamy, wife sharing, widow inheritance, violence and genital mutilation. This adds on to the denial of their legal and equal rights to education, health services, work and income.

Women and the youth generally lack access to and control over productive resources – natural resources, capital and information. Uses of natural resources are gender biased where women have rights to renewable use (plant crops, harvest leaves, firewood) and men rights to consumptive use (harvest whole trees and to sell land). Women participate less in decision making and sharing of benefits from natural resources. Again, the key constraints are limited access to education and training, credit and extension services. Extension workers in the sector have not been gender responsive in approach. Additionally, political commitment to addressing gender issues is waning.

### **Some important impacts on environment and quality of life**

Women in the Lake Basin play a major role in natural resource utilisation and management for sustainable development even though their access to and control over natural resources is limited. Although women's central role is in the provision of food security and nutrition, their efforts have not been recognised or translated into concrete policies and programmes.

Poor households and especially female-headed households are most vulnerable to increased environmental risks, uncertainty and insecure entitlements. Poor rural (women) pay the price by spending more time and energy in accessing water, fuel wood and land for cultivation. This trend is likely to get worse if the rapid environmental degradation is not reversed. The support and expansion of new energy sources like biogas and solar energy could reduce the burden for women as well as environmental destruction.

A big part of the women's productive activity is localised in the informal economy and is not represented in official statistics on food supply and movement. Recognition and adequate compensation of women's productive as well as their reproductive labour is essential to maintaining their contribution to the basin food production and security in the Basin. The social restrictions that prevent many women from taking full part in economic activities and decision making regarding the use of family assets, have a direct and detrimental impact on their ability to manage food production and security. Studies show that households in which women controlled income demonstrated better levels of nutrition.

- Because gender is a crosscutting issue, co-ordination and collaboration with other sectors is necessary. Mainstreaming a gender perspective in all policy planning, programming, implementation and evaluation of activities would need to address the following set of challenges:
- Promoting the participation of women at all levels and fields of activity, giving particular attention to women's own priorities and perspectives in redefining both the goals and means of development;
- Developing specific development policies for the benefit of girls and women particularly those policies that promote equality and endogenous capacity building.
- Formulating policies that bring about equal access to education for women and girls by eliminating discrimination between women and men, girls and boys with regard to opportunities in education and training and the levels achieved in all fields.
- Women's contribution to the management of natural resources and environmental protection.
- Women education and promotion of co-operative and farmer/business groups
- Accessibility and basic skills provision on financial management and accounting;
- Labour saving technologies;

- Women's access to means of production (land, labour, capital, technical inputs etc).
- Women and children rights awareness raising.

## 6.4 The roles of NGOs and CSOs

Civil society organisations (CSOs) are highly diversified. CSOs cover non-government organisations (NGOs) as well as community based organisations (CSOs), religious organisations, professional associations, trade unions, co-operatives, voluntary and self help groups. Also political parties, legal and human rights groups, advocacy organisations and organisations representing socially excluded groups, media and information agencies are part of this very broad span of civic society activities.

NGOs are sometimes confused with Community Based Organisations (CBOs). Not all NGOs however, are CBOs. The latter only benefit their own members and hence they are membership organisations, generally with a broad-based membership built from grassroots. NGOs are generally founded out of private initiatives and can also be public entities benefiting the other person. They can be 'client-oriented' as compared to the 'membership orientation of CBOs.

Proponents of the move towards greater influence and participation of these types of organisation argue they are needed to protect associational rights. Others claim the essential need to protect the public from – real or perceived – abuse and fraud by public institutions, political or administrative. Thus a universal problem of regulation of civic organisations arises.

### **Present situation, trends and driving forces**

The two main region-wide NGOs in the area are ECOVIC<sup>37</sup>, which covers the entire Lake Basin and addresses poverty issues and environmental degradation of the Lake, and LANESO<sup>38</sup> which addresses sanitation and poverty issues. Both organisations focus on working with grassroots people, and have for a number of years been closely collaborating with various donors in the Lake Basin.

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<sup>37</sup> ECOVIC= The East African Communities' Organisation for the Management of Lake Victoria.

<sup>38</sup> LANESO= Lake Nyasa ('nyasa' meaning water in kisukuma) Environmental Sanitation Organisation

The important role of local actors in sustainable development has been realised by the three governments although policies and approaches may differ from country to country.

Vibrant and responsible civic organisations play a vital role in society. As policies of decentralisation, privatisation and private-public partnership have been a central element of public sector reforms throughout Africa, it is not surprising so observe a move to liberalise legislation to permit and encourage civic organisations to take part. This has resulted in a trend described as the 'new scramble'.

No complete inventory exists over all CSOs in the Lake Basin. It has, however, been a remarkable expansion in the number of CSOs during the 1990s. Taking Tanzania as an example, the number of organisations registered as NGOs (excluding religious organisations, trade unions and co-operatives), has faced a remarkable increase from around 200 in 1993 to nearly 3000 in 2000. In Kenya alone there were at least 23 000 women's organisations registered in 1995.

The basis for CSOs has traditionally been social and welfare activities, but a trend toward diversification can be observed, as environmental issues, education, shelter water and sanitation as well as programmes for various marginalized groups are being established. Of a total of 268 registered NGOs in the Lake regions of Tanzania, 60% are engaged in socio-economic development issues. The rest is divided between environmental issues and health and education issues (15 % for each). Some (7%) are engaged in agriculture and a few in fisheries and business development. There is a rural-urban divide as more than half of the NGOs are based in the three regional cities.

During the latter years, advocacy and human rights organisations have become increasingly visible. Civil society coalitions have emerged, challenging the government mainly on women's rights, land rights and constitutional reforms. Although the governments have grown to be more accepting of CSOs, they still often remain sensitive to criticism in a number of policy areas. However, the government has emphasised its adoption of the spirits of genuine partnership between the government and the people to ensure delivery of services. Most of the prominent advocacy groups are based in urban centres, often dominated by professional groups. CSOs working for the interests of the poor often initially emerge through initiatives of middle class people or professional elites, and not necessarily the poor themselves. Again using Tanzania as an example, the Lawyer's Environmental Action Team (LEAT) seems to be one of the most active advocacy group addressing environmental issues and their links to national and international law.





## **7 The role of donors and international organisations**

The aim of this chapter is to present an overall picture of the major donor supported projects and programmes in the Lake Victoria Basin. Over the years donor involvement has had significant impacts on research and development activities in the lake, as well as on the institutional framework for environmental and resource management in the lake and its catchment. Efforts to restore the ecological balance of Lake Victoria, to secure a more sustainable and equitable use of its resources and to establish institutional and legal arrangements to monitor and control its future development, will need strong backing from donors and international financial institutions. First, we give a brief presentation of the major ongoing programmes and projects of a regional character. Following from what might be termed a paradigmatic shift in donor policies, initiatives have recently been taken to strengthen more long-term strategic approaches to address questions of non-sustainable development and ecological unbalance. Last, we mention a few other donor-supported projects of relevance for the Vision Statement Facilitation Process without any claim to give a complete overview.

### **7.1 Major ongoing programmes**

Co-operation between Kenya, Tanzania and Uganda on Lake Victoria fisheries dates back to the pre-independence period and continued through the establishment of the East African Community in 1967. After the collapse of the Community in 1977 regional co-operation faced a relapse. Following from initiatives taken by the FAO (CIFA Sub-Committee on Lake Victoria), the Lake Victoria Fisheries Organisation (LVFO) was established in 1994 by a convention signed by the three riparian states. The establishment of LVFO was financially supported by FAO, the European Union through the Victoria Fisheries Research Project (LVFRP), and the World Bank/Global Environmental Facility (GEF) through Lake Victoria Environmental Management Project (LVEMP). Thus, the three regional projects have their individual historical background and specifics as far as field of operation, task structure, institutional arrangements and donor support are concerned. Their operations are largely overlapping and in practice scantily co-ordinated.

#### **Lake Victoria Fisheries Organisation**

Except from the initial grants from the EU, the World Bank and GEF, the ongoing activities of LVFO are primarily funded by contributions from the three contracting states. In addition LVFO has entered into Memorandums

of Understanding with FAO, UNESCO, the United Nations University (International Network for Water, Environment and Health), the Great Lakes Fisheries Commission (Canada and the USA) and the University of Zurich for support in various fields for the future operations and activities of LVFO.

The main objectives of LVFO as stipulated in its Convention are to harmonise national measures for sustainable use of the lake's resources and to develop and adopt conservation and management measures accordingly. The Convention delineates a set of functions to achieve the overall objective, inter alia to provide a forum for discussion of initiatives to deal with environmental conditions and water quality in the Lake Basin, to promote research with respect to the living resources of the lake, and to address problems of non-indigenous species.

It is quite obvious from the Convention as well as from its strategy documents that the functions of LVFO to a high degree overlap those of LVEMP and LVFRP (see below).

### **Lake Victoria Environment Management Project**

Following from the initiative to establish LVFO, and again supported by the World Bank and GEF, Lake Victoria Environmental Management Project (LVEMP) was established for a five-year period effective from March 1997 (phase 1). The overall goal of LVEMP is to introduce environmentally and socially sustainable economic development to the region while at the same time maintaining the rich biodiversity and resource base for the use of future generations. Its multi-sectoral approach covers 11 different components over the Lake Victoria basin comprising aspects of fisheries research and management, environmental issues, water quality and pollution control, land use and management, as well as institutional issues and capacity building.

The World Bank has started the preparatory planning processes for phase 2 of LVEMP, which is scheduled to run for a period of 15 years from 2004. Country missions have been implemented and agencies identified to be included in the planning and implementation of LVEMP2. According to its Aide Memoire the missions will identify government initiatives related to decentralisation, civil sector reform, private sector investment, and other activities related to land use, river basin and natural resources management. The present Vision Statement Facilitation Project is designed to help bridging the two phases of LVEMP and to give long-term priorities and strategies to feed into action plans and progress indicators for phase 2.

### **Lake Victoria Fisheries Research Programme**

The European Union has been supporting fisheries research in Lake Victoria since 1989. After a pilot period, the Lake Victoria Fisheries Research Programme (LVFRP) started in earnest in 1996. Though multi-sectoral in approach, LVFRP has been mainly concerned with fisheries-related issues such as fish exports and marketing, quality concerns and standard setting in fisheries management and processing. However, issues such as water pollution, water hyacinth infestation, and institutional issues relating to common-pool resource management and collective action has also been addressed, indicating overlapping functions in relation to both LVFO and LVEMP. LVFRP phase 2 has ended in December 2001 and the continuation of the project is presently under consideration by the EU. A planning mission conducted in February 2002 concluded that there is a very strong case for close collaboration and co-operation between LVFRP, LVFO and LVEMP. It is recommended that funding from EU and WB/GEF should be harmonised and, subsequently, should involve parallel funding.

### **The Nile Perch Project**

The International Conservation Union (IUCN) has been engaged in two projects of regional character. The so-called "Nile Perch project" ("Biodiversity and sustainable fisheries in Lake Victoria") has produced a wide array of research-based documentation of the ecological and socio-economic situation of Lake Victoria in the IUCN report series: Socio-economics of the Lake Victoria Fisheries. The LVFO and IUCN have drawn up two Memorandum of Understanding with respect to implementation of the two projects in order to co-operate and co-ordinate activities. A second phase of the Nile Perch project is planned and will concentrate on socio-economic issues, as well as the dissemination of information and awareness creating in communities around the lake. Together with other donors, IUCN has also supported the JET-network of environmental journalists working in the lake area.

## **7.2. Shift in donor focus and approaches**

Initially, much of the international donor interest in the Lake Victoria area was focused on fisheries and fisheries management. The interest and approaches of international donors, including FAO, was to a large extent focused on ecology, biology, hydrology, water pollution and related natural science concerns. In general, socio-economic issues played a rather marginal role in determining donor interest and funding over the initial post-independence period. Socio-economic impacts of the accelerated deterioration of the ecological situation in the lake and its catchment as well as effects of the changes in industrial activities – in particular the commercialisation of the fisheries – received much less attention. The

same applies to issues like questions of devolution and decentralisation of resources management and control, public participation, and regional harmonisation of policies and regulations.

Donor interest in socio-economic issues began to emerge in the late 1980s and early 1990s. This was due both to an increasing recognition of socio-economic problems faced by communities in the Lake Victoria basin as well as to growing world-wide concerns about sustainable development. This period also coincided with an evident “boom and bust” cycle in the Nile perch fishery, with harsh consequences for local fishermen and businesses (Namisi 2000: 65). At the same time, a growing understanding emerged of the need to co-ordinate the many fragmented – and partly donor driven – foreign aid projects in the area. As of late 1990s, nine different regional projects, all of them donor supported, were in operation in the lake area (SIDA 1999).

The efforts in the recent years of international donors and EAC (as well as other governments in the region) to, jointly, draw up a more integrated and comprehensive development strategy for the Nile Basin and the Lake Victoria area, should be seen against this background.

### 7.3. Region-wide strategic initiatives

#### **Nile Basin Initiative**

Following from an initiative launched by the Council of Ministers of Water Affairs (Nile-COM) of the Nile Basin States in 1992 the Canadian International Development Agency (CIDA) supported the development of an Action Plan for the Nile River Basin. In 1997 UNDP and the World Bank joined CIDA to make up a joint ‘Nile-Team’ to play a lead role in co-ordinating the inputs of external agencies to finance and implement the Action Plan. Formally established in February 1999 the Nile Basin Initiative, comprising of the ten riparian states, decided to develop a broad-based basin-wide programme (the Shared Vision Programme) of collaborative action, exchange of experience, and capacity building, covering seven project areas:

- Nile Transboundary Environmental Action
- Nile Basin Regional Power Trade
- Efficient Water Use for Agricultural Production
- Water Resources Planning and Management
- Confidence Building and Stakeholder Involvement (Communication)
- Applied Training

- Socio-economic Development and Benefit-Sharing.

The Shared Vision Programme was endorsed by Nile-COM in March 2001. In parallel, sub-basin action programmes (Subsidiary Action Programmes) have been prepared geared towards physical investments in the Nile Equatorial Lakes and the Eastern Nile regions. Questions of co-ordination and/or integration between the different ongoing Lake Victoria programmes and the Nile Basin Initiative, in particular the various NELSAP activities, will have to be addressed as an important element in the future strategy for the Lake Basin. The same is the case for the implications and impacts of the Nile Treaty of 1920 on the management and benefit sharing of the Lake Victoria water resources.<sup>39</sup>

### **The EAC Strategic Partnership Agreement**

On the initiative of SIDA, the East African Community and the governments of Sweden, France and Norway together with the World Bank and East African Development Bank have signed a partnership agreement on “The Promotion of Sustainable Development in the Lake Victoria Basin”. The basis of this agreement is outlined in a Strategy Paper prepared by SIDA (SIDA 1999) emphasising the need to take a regional approach to the complex and multi-sector nature of the problems facing Lake Victoria. The agreement points at the need for donors to take on long-term commitments and envisages a time perspective of 20 years to reach the goal “to contribute to an equitable and sustainable development – economic, social and environmental – to the benefit of the people living in the Lake Victoria Basin area. The agreement underlines the importance of reaching a common understanding of the task ahead and the need to reach a shared vision among the EAC states, the international development banks and the donor community, in particular the EU and bilateral donors: “A long-term development process needs to be put in place and be guided by a vision rather than by sector specific targets only... involving as many of the relevant stakeholders as feasible.” The agreement accentuates the trans-boundary nature of the problems facing Lake Victoria and states that parallel regional and national approaches to problem solving will be needed. The choice between regional or national implementation will be dependent on actual context and nature of the problem at hand. As a rule, implementation should either be left to specialised regional institutions, national or local authorities according to the principle of subsidiarity.

Four broad areas of intervention are focused:

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<sup>39</sup> The Nile Treaty, signed in 1929 (last revised in 1959) between Great Britain and Egypt (and later also Sudan), regulates the use of *all* water in the river Nile, effectively barring upstream countries from tapping common, shared water resources.

- The building and strengthening of networks between national institutions, local authorities, administrations, universities, business organisations and NGOs;
- The development of knowledge, institutional capacity through strengthening institutions, training activities and research;
- The mapping of pollution sources and unsustainable use of natural resources, setting priorities for necessary institutional reforms and investment programmes;
- The development of a framework for investments in the different economic sectors such as industry, agriculture, livestock, forestry, fishery, tourism, water treatment, energy and infrastructure for the lake basin area.

It is obvious that the vision development process envisaged in the Partnership Agreement is intended to address issues and objectives near identical to those of the Vision Statement Facilitation Project. The relationship between the two parallel processes was discussed in a meeting between representatives from the World Bank, SIDA and NORAD 28 November 2001, and further discussed at the workshop in Kampala between July 12-13<sup>th</sup> 2002. Although the Vision Statement Facilitation Project is supposed to work closely with both LVEMP and EAC as a regional co-ordinator, the independent status of the Vision Statement Facilitation is accentuated so as to allow for broad stakeholder involvement and open processes.

### **LVFO Strategic Vision 1999-2015**

The Strategic Vision developed by LVFO for a period parallel to that of LVEMP2 will have crucial impact on the future operations of LVEMP. Based on an ecosystem approach, the LVFO Strategic Vision gives rise to five specific statements covering the following areas:

- The Lake Victoria ecosystem and sustainable resources
- Integrated fisheries management
- Co-ordinated research programmes
- Information generation, flow and exchange
- Institutional/stakeholder partnerships

Although basically addressing the problems of the aquatic ecosystem of the lake itself, the vision document exposes obvious overlaps with most of the ongoing LVEMP components (as well as those of LVFRP). More specifically, this relates to water quality and quantity monitoring, fisheries research and fisheries management, water hyacinth control and wetlands management. In spite of this, the strategy document makes no specific



mention of a need to co-ordinate activities with LVEMP or any form of collaboration.

#### 7.4. Donor involvement in specific sectors and projects

*SIDA* has since long supported development activities of direct relevance to the Lake Victoria Basin, and has also established a special Lake Victoria Part within its Africa Department. The now finalised Health, Sanitation and Water (HESAWA) Programme, has been directed towards all districts along the lake shore, designed to meet the need for integration of rural water supply, sanitation and health improvement. *SIDA* is funding several District Development Programmes, regional research and training programmes, as well as giving support to health and humanitarian relief programmes through a series of regional and local institutions and NGOs. *SIDA* also supports regional media organisations and networks for dissemination of information on governance and environmental issues (e.g. the Network for Environmental Journalists, JET). Another major project is the afforestation and agro-forestry program “VI-skogen” (We Forest) run by the Nordic Co-operative Movement in the three EAC countries. The basic idea of the program is to provide guidance to the local through local ‘extension agents’ trained by the program, on how to make use of more sustainable combinations of agriculture and forestry to stop afforestation, increase production and prevent soil erosion. At present more than one million people are involved in the program.

The various program have, however, not been guided by any common development strategy across the region. The *SIDA* initiative to the Partnership Agreement (*SIDA* 1999) was prepared to meet a need for a more co-ordinated and comprehensive approach to development support in the region.

*NORAD* has a long history as a major donor in Tanzania supporting activities in a broad range of sectors as well as in specific regions (however not in the Lake regions). Bilateral assistance to Kenya was terminated in the 1980s and just recently resumed in Uganda. In Tanzania *NORAD* are presently supporting programmes of education, research and health (including HIV/AIDS) as well as giving support to public sector reforms (Local Government Reform Programme) and institutional capacity building in various sectors. In Uganda support *NORAD* have supported economic restructuring programmes, resource management (forestry) and programmes to strengthen democracy and human rights. On the regional scale *NORAD* is funding the Lake Victoria Vision Statement Facilitation Project.

*The Commonwealth Secretariat* has supported LVFO and collaborating national authorities in conducting a fisheries human resources development programme involving a long-term post associated with the LVFO. This has been a lake-wide exercise and the Commonwealth Secretariat is likely to continue to fund the implementation of proposed activities for awareness building and training at the fishing community level.

*Department For International Development (DFID)* has been engaged in an integrated lake management project in lake George and Lake Kyoga in Uganda with the to involve local communities in the management of fishery resources. The project is working through the district authorities and, although Lake Victoria is not involved directly, there are important lessons to learn about the time and effort needed to sensitise communities about fisheries management and the need to organise participatory processes in order to reach common understanding and consensus between various groups of stakeholders.

*African Development Bank (ADB)*: A proposed loan to Uganda (approximately US\$ 20 million) is concerned with the upgrading of fish landings, fish markets and aquaculture facilities. Much of the funding will be used to improve the facilities associated with Nile perch export requirements and there will also be provision to supply patrol boats. Although the project covers the whole country some of the activities will have a direct bearing upon the design of a new project for Lake Victoria. If this project is approved there will be a need to avoid duplication especially for those elements applying to Lake Victoria.

*Lake Victoria Water Resources Project (LVWRP)*, supported by FAO and the Governments of Italy and Japan 1996-1999, was established to collect data and set up mechanisms to cater for the basic infrastructure (e.g. monitoring network, GIS and data bases, technology and professional skills) needed for more effective water management in the lake and its catchment area.

*UNIDO* is assisting technically on sanitary and health requirements for the fish exporting industry.

## 7.5. Some country specific activities

### **Kenya**

In Kenya, a variety of donor initiatives and donor-supported projects can be found in and around Lake Victoria. In additions to the basin-wide LVEMP1 and LVFRP, there are also regional programmes like East Africa Biodiversity Conservation project (funded by GEF), addressing important

trans-boundary biodiversity issues between Kenya, Uganda and Tanzania. Another project, also funded by GEF, is the East Africa Rift Valley Lakes biodiversity project addressing conservation of lakes and wetlands in Kenya, Ethiopia and Tanzania. A substantial number of NGOs also get support for various initiatives that include projects such as Environmental Restoration Programme, run by OSIENALA and funded by AFEW (USA) and the Uhai Lake Regional Forum (funded by Action Aid Kenya). In addition a series of government, educational institutions and universities receive foreign support particularly directed at institutional strengthening and capacity building.

### **Tanzania**

Tanzania's international collaboration has shifted from a model based on intervention from above in the 1970s through models of structural adjustments and liberalisation policies in the later parts of the 1980s to multi-party democracy and democratisation from the early 1990s. Policies and reform programmes for decentralisation and devolution of power to local authorities (the Local Government Reform Programme) are typical of this development. In the late part of the 1990s we have seen a global paradigmatic shift in north-south development relations emerging: a shift from institutional development co-operation to partnership between stakeholders. A necessary corollary to this shift in paradigm is the inclusion of participatory processes and empowerment of local people in order to contribute to broad based development, the fruits of which the stakeholders gradually shall share.

Lake Basin projects in Tanzania covers a wide range of issues. Of ongoing projects and programmes The Local Government Reform programme, with basket funding from a series of donors, is probably the most central to the future of LVEMP. Common to most development projects is meagre, if any, co-ordination or collaboration with other projects. Many of the projects have weak linkages to local authorities, despite the fact that these aspects often are addressed. These are the major challenges for sustainability for ongoing and future projects. Due to the fact that development funds at local government level are negligible, development funds will by and large only be available through projects directly supported by donors.

### **Uganda**

Uganda received an increasing amount of donor support from 1980 to 1995, after which aid started to level off. Roughly half of total assistance since mid 1980s has been associated with structural adjustment programmes. Until recently foreign aid was provided mainly as loans from multilateral institutions, bilateral assistance only came to play a more dominant role in the 1990s. Uganda was the first country to receive

support through the debt initiative for the Heavily Indebted Poor Countries (HIPC). Aid co-ordination improved considerably during the 1990s, with the government playing a more active role and with intensified local donor co-ordination (Holmgren, et al, 1999).

## 8. References

The lists below give an overview of most of the background documentation used in the preparation of the respective chapters of the report. Some reports and documents refer to specific issues in specific countries, others refer to themes of an overall nature for the whole Lake and/or the Lake Basin. We have chosen not to present a total list of references for the whole report, but to list what is actually used as sources and reference material under the various headings. Therefore, some of the policy documents and research reports are referred to under several themes.

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World Bank (1996); *Staff Appraisal Report for the LVEMP*.

## List of acronyms

ADB	African Development Bank
AFEW	African Fund for Endangered Wildlife
AIDS	Acquired Immune Deficiency Syndrome
BOT	Bank of Tanzania
CBO	Community Based Organisation
CIFA	(under FAO))
CSO	Civil Society Organisation
EAC	East African Community
ECOVIC	The East African Communities' Organisation for the Management of Lake Victoria.
EIA	Environmental Impact Assessment
EU	European Union
FAO	Food and Agriculture Organisation (UN)
FSUP	Forest Sector Umbrella Programme (Uganda)
GDP	Gross Domestic Product
CIDA	Canadian International Development Agency
DFID	Department for International Development (UK)
DG	Directorate General (EU)
FAO	Food and Agriculture Organisation (of UN)
FY	Financial Year
GIS	Geographic Information Systems
GEF	Global Environmental Facility
HESAWA	Health, Sanitation and Water Programme (Sida)
HIPC	Heavily Indebted Poor Countries
HIV	Human Immunodeficiency Virus
IC	International Consultant
ICCON	International Consortium for Cooperation on the Nile
ICRAF	International Centre for Research on Agro-Forestry
IFAD	International Fund for Agricultural Development
IUCN	International Union for the Conservation of Nature
JET	Journalists' Environmental Network
KSH	Kenyan shilling
LANESO	Lake Nyasa ('nyasa' water in kisukuma) Environmental Sanitation Organisation
LGRP	Local Government Reform Programme (Tanzania)
LMC	Landing Management Committees (Uganda).
LV	Lake Victoria
LVEMP	Lake Victoria Environment Management Project (1 and 2)
LVFO	Lake Victoria Fisheries Organisation
LVFRP	Lake Victoria Fisheries Research Programme
LVWRP	Lake Victoria Water Resources Project

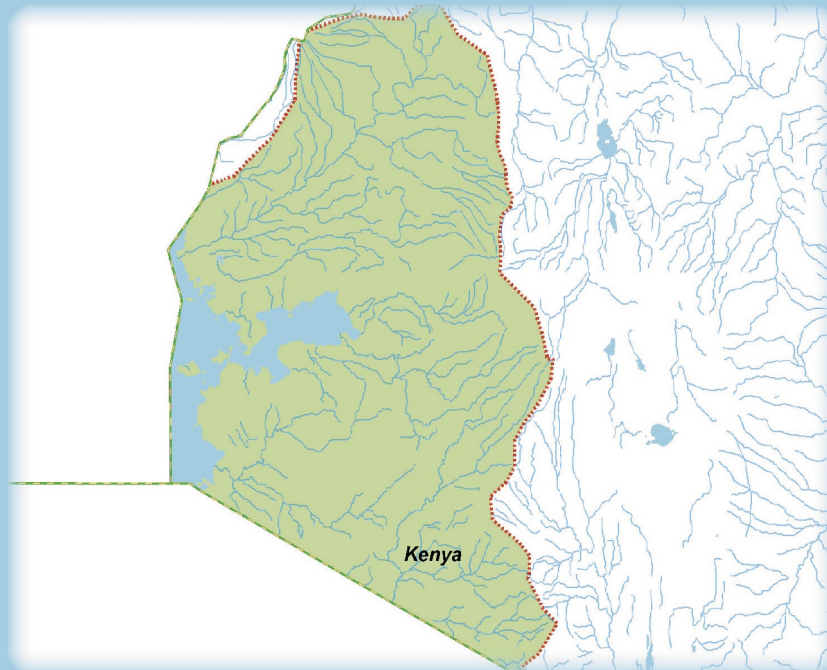
MLWE	Ministry of Lands, Water and Environment,(Uganda)
MOARD	Ministry of Agriculture and Rural Development (Tanzania)
(MOE&NR)	Ministry of Environment and Natural Resources (Tanzania)
NBI	Nile Basin Initiative
NC	National Consultant
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NGO	Non Governmental Organisation
Nile-COM States)	Council of Ministers of Water Affairs (of the Nile Basin States)
NORAD	Norwegian Agency for Development
NPES	National Poverty Eradication Strategy has been formulated.
NTF	National Task Force
OSIENALA	Organisation ..... Lake Victoria
PRSP	Poverty Reduction Strategy Paper
RTF	Regional Task Force
SAP	Structural Adjustment Programmes
SIDA	Swedish International Development Agency
SDI	Sexually Transferable Infections
STD	Sexually Transferable Deceases
TAS	Tanzania Assistance Strategy
TAWOMA	(In kiswahili) Women Miners Association
TSH	Tanzanian shilling
UN	United Nations
UNDP	Development Programme
UNESCO	United Nation Education (S C) Organisation
UNIDO	United Nation Industrial Development Organisation
URT	United Republic of Tanzania
UPE	Universal Primary Education (Uganda)
USD	American (US) Dollars
USH	Ugandan shilling
WB	World Bank





# The Vision and Strategy Framework for Management and Development of Lake Victoria Basin

## Annex II: Kenya Country Report



A report by

The Kenyan National Task Force

September 2003

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## **Acknowledgments**

The project, whose implementation culminated in the production of this document, was conceptualised and predicated on the principles of people's empowerment and participation. This was a bold, wise and progressive thinking on the part of the concept originators and decision-makers at all the levels of the East African Community secretariat, the Kenya Government and the involved development partners.

The EAC secretariat, the Kenyan Government (who were the designated clients to the process) supported the process with resources, expertise, logistics and guidance to ensure its success. The Government of Norway provided the funds through the World Bank. The concluding activities of the project were, however, funded by the Government of Sweden. We sincerely thank the clients and all the involved development partners.

The Lake basin community accepted, supported and participated this project to ensure its success. This showed their wish to see a better management of the environment and a positive change in their socio-economic lives. The community were cooperative throughout the project. The Management of the project was put in the hands of the National Task Force from the day it was commissioned by the Government of Kenya on December 22, 2002. The 16 members of the NTF all demonstrated diligence, resilience and tenacity under the chairmanship of Mr. Joseph Kwaka.

The NTF collected the data in 11 districts, assisted by selected government officers and individuals from the civil society. We want to thank the latter lot for applying their experience and skills. The data was then sorted out and analysed by a team of selected five NTF members. This is the drafting team that put out the initial working draft document. This team had to shift into the data back and forth and weigh them on various contextual scales. They eventually produced a document that was considered as appropriate along with the others from the Partner States of the East African Community.

This final document has been produced as a result of rigorous re-writing of existing chapters, composing new parts and thorough editing by a team comprising Mr. Joseph Kwaka (Chairman of the NTF), Mr. George Anyango (the Government Focal-Point Person), and Ms Lynette Obare (ICRAF-based Consultant Geographer). They deserve sincere gratitude for their commitment to producing a polished document.

This project would not have taken off and gone through to its success without Ms Getrude Kopyo, the National Consultant (and her team) who has been instrumental in planning, interpretation of the process and roles, managing the logistics, production of the initial draft document, managing the project funds and mobilising resources to fill the gaps. Special gratitude goes to Mr. Per Carlson,

from the Embassy of Sweden. He and his colleagues lent critical funding support for completion of the project.

Finally, we most sincerely thank all those who were involved in the project in one way or another and those whose input, however small, contributed to the production of this document.

## **List of Abbreviations**

AIDS	:	Acquired Immune-Deficiency Syndrome
BMU	:	Beach Management Unit
CBS	:	Central Bureau of Statistics
CBO	:	Community Based Organization
CSO	:	Civil Society Organization
CYP:	:	Commonwealth Youth Programmes
DDO	:	District Development Officer
DN	:	Daily Nation
EAC	:	East African Community
FGM	:	Female Genital Mutilation
HIV	:	Human Immune Virus
ICRAF	:	International Centre for Research on Agroforestry
IT	:	Information Technology
KARI	:	Kenya Agricultural Research Institute
KCC	:	Kenya Cooperative Creameries
KEMFRI	:	Kenya Marine and Fisheries Institute
KGCCU	:	Kenya Grain Growers Cooperative Union
KICOMI	:	Kisumu Cotton Mills
KPLC	:	Kenya Power & Lighting Company
LVEMP	:	Lake Victoria Environmental Management Project
MOA	:	Ministry of Agriculture
MOU	:	Memorandum of Understanding
NARC	:	National Rainbow Coalition
NEMA	:	National Environment Management Authority
NGO	:	Non-Governmental Organization
NTF	:	National Task Force
TSC	:	Teachers Service Commission
VCT	:	Voluntary Counseling & Testing
WTO	:	World Trade Organization

## **Executive Summary**

Following the revival of the East African Community (EAC), the three East African countries of Kenya, Uganda and Tanzania have embarked on a cooperation course leading to the establishment of a customs union, a common market, monetary union and ultimately a Political Federation. This major objective of the community as provided for in the Treaty for the establishment of the East African Community will be guided by agreed principles and within the framework of a cooperation spelling out broad socio-economic and environmental areas of engagement.

Article 114 of the Treaty mandates the three Partner State, inter alia, to jointly develop and manage their natural resources in a sustainable manner. In recognition of the position the Lake Victoria occupies as a common heritage to the three countries, the Treaty proposes the establishment of a body for its management.

In pursuit of this mandate, the EAC, in its 2001-2005 Development Strategy proposed to establish an institutional and legal framework to coordinate the development and management of the Lake Victoria Basin. This Report on the *Vision and Strategy for the Development and Management of Lake Victoria Basin* has been formulated within this background. The initiative was borne out of the concern that the Basin boasts of enormous natural resources and yet it also suffers immensely from poverty, low economic growth and environmental degradation. The formulation of this Programme recognised the major regional initiatives that have hitherto concentrated in the Basin, not least the Lake Victoria Environmental Management Programme (LVEMP) and the Lake Victoria Fisheries Organisation (LVFO). The focus of the programme therefore was to develop an overall long-term Vision and Strategy which would provide a guiding principle to any future development undertakings in the Basin.

The Kenya National Task Force carried out the exercise in a highly participatory manner involving the communities and other agencies within the Basin. The components of the Report highlight the introduction; the Process (Project Implementation); Threats and Challenges; Visions, Strategies and Benchmarks; and Conclusions.

### Introduction

Lake Victoria, which is at the border intersection between Tanzania, Uganda and Kenya, is the second largest fresh water lake in the world. Lake Victoria has a surface of 68,000 km<sup>2</sup> and adjoining catchments of 184,000 km<sup>2</sup>, and sustains the lives of approximately 24.1 million people in Uganda, Tanzania and Kenya.

The lake (water body) and its catchment (the watershed of the rivers and streams that feed into the lake) form the Lake Victoria Basin. The lake basin is a major



source of food, energy, drinking and irrigation water supply, as well as providing water transport and a natural habitat to a wide range of biodiversity.

The basin in Kenya is home to about 11 million inhabitants. The Ethnic communities in the basin are: the Luo, the Abagussi, the Abaluhya, the Abakuria, the Abasuba, the Maasai, the Teso, and the Kalenjin. Kenya owns approximately 6% of Lake Victoria, while Uganda and Tanzania jointly own the bulk balance of 94%.

### **Project Implementation**

This report has been compiled with information from both secondary and primary data. Literature review has covered books, presentation papers and newspapers.

In the collection of primary data, the Kenya National Task Force adopted mainly the qualitative methods and participatory approaches to solicit views and information from the riparian communities, officials of government and other stakeholders through workshops, focus group discussions, key informant interviews, and other informal sources of information gathering.

The generated data for each sector were then analysed within six broad themes, namely: -

- (i) Socio-economics and Demography
- (ii) Natural Resources
- (iii) Ecology and Environment
- (iv) Governance, Policy and Institutions
- (v) Gender and Development; and
- (vi) HIV/AIDS

From the information collated from the districts, a total of 14 sectors could be discerned namely: water; fisheries; human resources and employment; mining; tourism and wildlife; agriculture and livestock; sports, recreation and culture; physical infrastructure; health and HIV; energy; industry and commerce; forestry; and education. The analyses therefore were underpinned by the cited sectors.

### **Threats and Challenges**

The magnitude and reality of social processes, propelled by rapid population growth with its accompanying increasing patterns of demand for environmental goods and services, could therefore pose potential threat if not guided by sound policies that ensure sustainability in resource use. In the six thematic areas, a number of threats and challenges were identified by the communities. If not checked, these threats and challenges could undermine the existing potentials in each sector. The identified threats and challenges under each theme are summarized here below.

### ***Theme I: Socio-economics and demography***

Lake Victoria Basin is endowed with enormous natural resources. These include human resources, minerals, forests, and fishery resources, among others. The region has a population of 11 million people. It is traversed by major rivers that flow into the Lake Victoria. In spite of these glaring resource endowments, the Basin is faced with major challenges and threats. Poverty levels in the Basin stand at an average of 63%. The Basin has also suffered a continuous environmental degradation over the years. Other challenges facing the basin are in the form of pressure exerted by the growing population on various economic units such as land resources and social amenities like education and health. The problem of communicable diseases also poses a unique set of challenges to the region. The HIV/AIDS pandemic has a high infection rate of about 30% especially among the productive age group (17 – 50 years).

### ***Theme II: Natural Resources***

Kenya's economy is natural resource dependent and this has placed immense pressures on them.

The land tenure reforms coupled with a rapid population increase have intensified land use in the Lake basin. Most of the natural resources in the region have become commercialised and the demand for their exploitation has increased tremendously. Further, colonial interventions on natural resources promoted mandatory soil, water, forest and wildlife conservation measures leading to hostility towards these practices and their current low adoption rates by communities.

The recent development trends and the new challenges reminiscent of such trends constitute a threat to this vast natural resource base.

### ***Theme III: Ecology and Environment***

A well-managed environment in the Lake Basin is critical to the survival of both fauna and flora that depend on it. Further, the high dependence of the Lake Basin communities on land and water resources for subsistence and economic gain make environmental conservation issues significant to their continued existence. The Lake Victoria Basin has experienced significant changes in its ecology and environment in the last 40 – 50 years. Some of the studies done indicate that there is a post-1960 ecological shift in Lake Victoria resulting from environmental degradation.

Within the same period, rapid eutrophication occurred with phosphorous levels increasing two to three fold and algal concentrations three to five times higher than before. These conditions favour the dominance of nitrogen fixing cyanobacteria and the spread of aquatic weeds such as water hyacinth.

### ***Theme IV: Governance, Policy and Institutions***

The management and control of natural resources, environment and improving the quality of life and other public affairs has always been in the

custody of the central government since independence (in 1963). The principle, system, structures and style of managing natural resources were inherited from the (British) colonial government. The colonial government's aim was to dispossess the people of, control and exploit the resources on behalf of and for the benefit of Britain. Implementation and enforcement was done through the government structures in which the Provincial Administration was the key institution for implementation. The government inherited and has continued to use the top-bottom approach in governance. This approach disempowers the local people and undermines a sense of ownership of resources, systems, policies and structures.

Therefore it was not surprising that the people of the basin displayed a mind-set that the government is responsible for the challenges and suggested intervention strategies that are to be adopted by the government. Several institutions are engaged in resource management or/and exploitation of Lake Victoria basin and its catchments. These institutions can be grouped into three broad sectors: Government, private sector and civil society. Most of these institutions often pursue their respective sector-specific priorities and approaches.

It was observed by the local people that gaps exist in the areas of all-encompassing and harmonizing framework and policies to provide a guide for other sector-specific policies and legislation. Other expressed concerns were that there was laxity in administration (especially with regard to enforcement of existing laws) and institutionalisation of community participation.

#### ***Theme V: Gender***

The lives of the ethnic groups that inhabit the Lake Victoria basin are still rooted in their traditional cultures. Patriarchy still dominates in access and control of means and factors of production, decision-making and leadership. Socialization has perpetuated social and power relationships that put the male gender in superior pedestal over the female gender. Women are mainly involved more on reproductive roles. Being bogged down by this category of work, women hardly get space and time to engage in productive roles, community managing or societal roles.

Participants at workshops observed with regret that most men were no longer performing their role of being true heads of their families – playing a lead role in providing the food and materials needs, and charting out the cause of economic development of the family. Many women have risen from merely being housewives to play the role of heading the family in terms of ensuring the material well-being of the family, and providing leadership in the community.

#### ***Theme VI: HIV/AIDS***

Between 1980s and the second half of 1990s the basin was considered as the epicentre of the HIV/AIDS pandemic in Kenya. According to the 2001

results of sentinel surveillance by the Ministry of Health, the region reported some of the highest incidence figures. HIV/AIDS has therefore exacerbated the poverty situation and set back the socio-economic gains made in the years before the late 1980s. The pandemic not only has negative impact on population development, it tears into the social fabric and undermines the beautiful age-old socio-cultural bedrocks such as the extended family system; it causes social and moral breakdown, gives rise to high incidence of crime and breeds insecurity; it threatens the quest to uphold societal values, norms and mores.

### **Visions, Strategies and Indicators**

Analysed within thematic groupings, the community had visions that emphasized: natural resources, socio-economic and demographic impacts, with ecological, environmental, gender concerns and HIV/AIDS in-built. Under each theme, the communities reflected on their desired visions (see the matrix on pages 56-64) which is hereby summarised as *'A Lake Basin Community envisages a sustained natural resource base within a well-conserved environment providing foundation for economic vibrancy that improves their livelihood and increasing opportunity for full realisation of their potential'*.

The conclusion and recommendations chapter summarizes the challenges and threats in the basin as embedded in underdevelopment. This situation has been caused more or less simultaneously by three factors. First, there must have been *a weakness on the part of the inhabitants of the basin that hindered their ability to adjust or adapt to the new socio-economic and political order.*

The argument develops farther that the complexity of the underdevelopment situation could not occur with only the factor of weakness on the part of the inhabitants, unless they were a stateless people in the primitive stages of human development. The argument asserts there is also *bad governance - poor management of public affairs, weak enforcing institutions or inappropriate laws/policies that let down the basin.*

The chapter argues the two factors have a third prop in the fact that *leadership appeared to have been wanting.*

The recommendation is that to put the development wagon on to the rail-road that leads to positive socio-economic changes, we must define this development as a process that reduces people's vulnerability and increases their capacity. In this definition, if equality and equity are the goals of development, then interventions must identify and address the causes of the people's weaknesses and establish their sources of strength; and understand the dynamic relationships between these two.

In this approach, the people must be put at the centre of planning and implementation of interventions. The main approach to development should be

one that has a long-term investment in the people of the basin. This is *capacity building* of the inhabitants. This would involve strengthening the capacity of the people to enable them to determine their values and priorities, and to take action on these as a basis of development.

The conclusion is a three-tier capacity building that targets the people (and puts them at the center of a long term development programme), another that targets governance and the third component that targets leadership. It is envisaged that this comprehensive capacity building will also address the weak socio-economic base on which rests the most devastating among the contemporary challenges – the HIV/AIDS pandemic.

This is the capacity building for the development of the basin that will identify the specific constraints that the women and men experience in their attempts to realize their basic rights and to get energized in their ability to overcome the causes of their exclusion and suffering. This multi-faceted capacity building approach will ensure inclusiveness in the process of pursuing a socially just and equitable society where the community lives in harmony with the environment and has the capacity to adjust to forces of change and manage the change.

# **C**hapter 1 **Introduction and Project Background**

## ***Introduction***

Lake Victoria, which is at the border intersection between Tanzania, Uganda and Kenya, is the second largest fresh water lake in the world. Lake Victoria has a surface of 68,000 km<sup>2</sup> and adjoining catchments of 184,000 km<sup>2</sup>. The lake sustains the lives of approximately 24.1 million people in Uganda, Tanzania and Kenya.

The lake (water body) and its catchment (the watershed of the rivers and streams that feed into the lake) form the Lake Victoria Basin. The lake basin is used as a source of food, energy, drinking and irrigation water supply, transport and the water body is also used as a repository for human, agricultural and industrial waste.

The basin in Kenya is home to about 11 million inhabitants. The Ethnic communities in the basin are: the Luo, Abagussi, the Abaluhya, the Abakuria, the Abasuba, the Maasai, the Teso, and) the Kalenjin. Kenya owns approximately 6% of Lake Victoria, while Uganda and Tanzania jointly own the bulk balance of 94%.

The three sister states have acknowledged that the aquatic life in the Lake Victoria, the natural resources, the ecology in the basin, the general quality of life of the contemporary riparian communities and the living conditions of the future generations that will depend on the lake and the basin's resources are threatened. The threats are caused by the current trends in environmental pollution, degradation, poverty, HIV/IDS, gender-based social problems, bad governance and unsustainable utilization or exploitation of natural resources in the basin.

The three states have also recognized that the situation is more or less the same in the whole basin across East Africa and up to Rwanda and Burundi. Consequently, the three states through the secretariat of the revived East African Community, sought funding from their development partners to implement a consultative project whose main aim would be to seek views from the stakeholders and come up with shared vision and strategy for management and development of the Lake Victoria Basin.

This report is the result of an assignment of the Government of Kenya to the Kenya National Task Force. It is the record of a process of consultative dialogue with the Kenyan people living in the Lake Victoria Basin and the catchments. These consultations took place between 20 December 2002 and March 2003.

## ***Project organization, roles and responsibilities***

The client was the Government of Kenya, and, the East African Community Secretariat, at the regional level. The Government of Norway, through the World Bank, funded the



Vision and Strategy Development Process. The funding support from the Norwegian government was exhausted before the completion of the process and the support was taken over by the government of Sweden.

The Government of Kenya and the East African Community provided the guidelines, coordination, logistics to the National Task Force, through the national focal point. Other District level resources especially motor vehicles, were made available by the different departments that were involved/requested.

### ***National Task Force***

The National Task Force (NTF) was constituted by the Government to be the custodian of the process. With support of District teams and village facilitators, the NTF conducted consultations with the Lake Victoria basin community in 11 sample Districts and produced District reports. The NTF selected a smaller sub-committee (drafting team), which collated information from the community and produce the initial Draft Kenyan Vision and Strategy Report.

The process of drafting the report involved analysing the eleven reports to: (i) thematic matrix with key issues, visions, strategies and emerging issues (ii) sector analysis by themes (iii) re-writing in narrative form. The NTF then presented the vision and strategy report to the Government through the focal point person in the Ministry of Water Resources and Development.

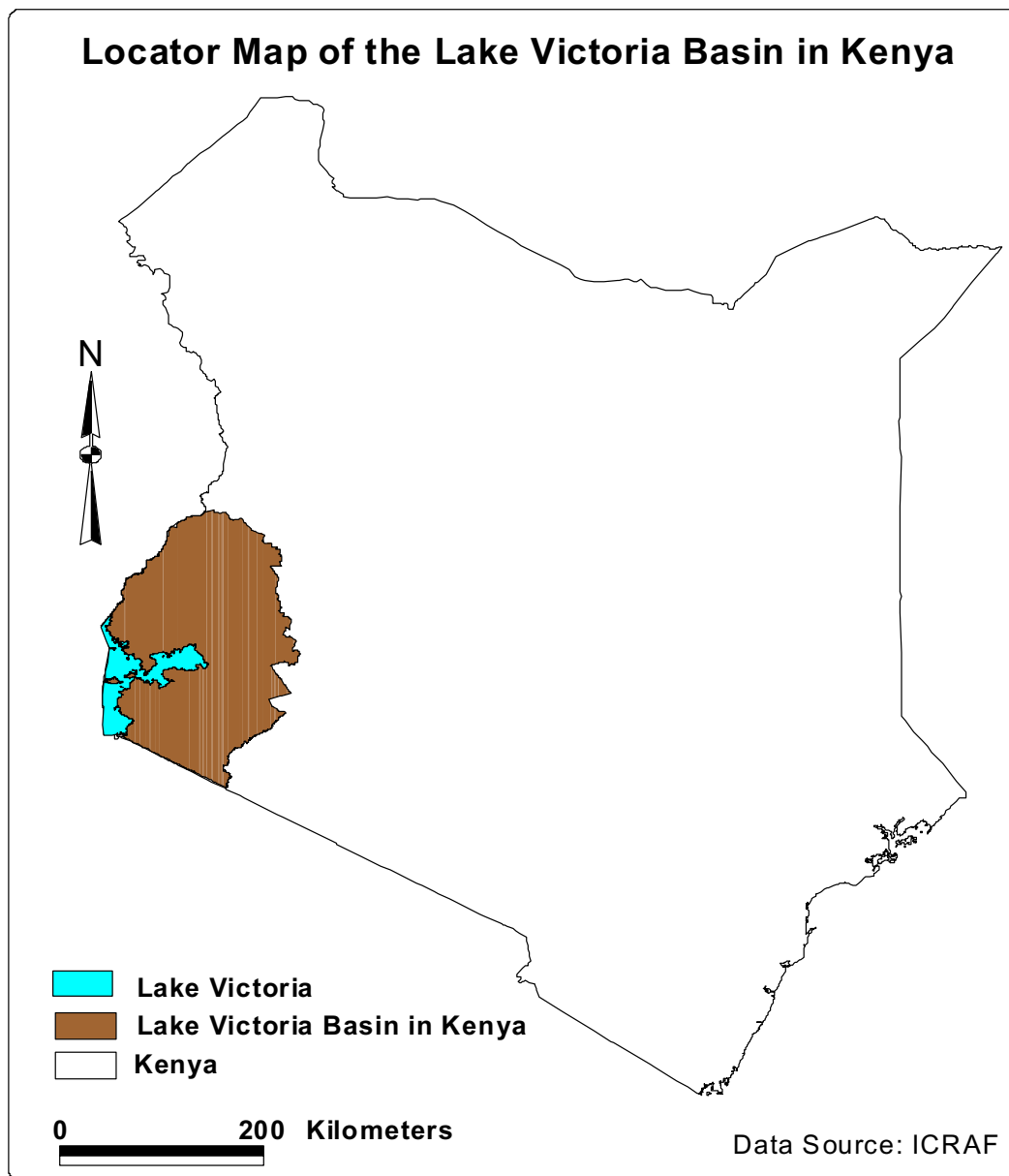
A team comprising the NTF Chairperson, the Focal Point Person, and a hired consultant finally wrote sections of the document to fill the gaps, re-wrote most of the sections, and edited, and produced the final document.

### ***National Consultant***

The National Consultant was recruited by the World Bank to undertake a multiplicity of assignments. In the docket of coordination, the consultant had to: interpret the intended vision development process, plan and coordinate activities, advise all the relevant stakeholders in the process; access, disburse and account for financial resources of the project and participate in the drafting of the vision and strategy document. The National Consultant also participated in the production of the initial version of vision and strategy.

### ***International Consultant***

In collaboration with the country team (Agrechs Development Consultants of Kenya), the International Consultant originated and presented the project work plan. From time to time, the National Consultant and the National Task Force sought clarification and advice from AGRECHS who attended some of the NTF workshops and meetings.



# Chapter 2

## Project Implementation

### ***Aim/Purpose of the Project***

The purpose of the project was to seek views and formulate a vision and strategy focusing on priorities and accountability of resource utilization in the Lake Basin. The major activities undertaken in all the 11 sampled riparian districts out of the 27 included:

1. Conducting information dissemination and sensitisation activities across the basin to sensitize and provide more information so as to facilitate informed discussions among the communities, government, civil society, and private sector of the intended objectives of the Vision Programme.
2. Mobilizing stakeholders to express their views on the vision and strategy for sustainable utilization of lake Victoria.
3. Conducting consultative sessions – using various qualitative methods - across the region to identify issues, challenges and concerns, and define shared visions and strategies.
4. Compiling a report and thereafter conducting validation and feedback sessions across the basin to establish that the issues, concerns, priorities, visions, and strategies are shared.

### ***Methodology and Approaches***

This report has been compiled with information from both secondary and primary data. Literature review has covered books, presentation papers and newspapers.

In the collection of primary data, the Kenya National Task Force adopted mainly the qualitative methods and participatory approaches to solicit views and information from the riparian communities, government sector heads and other stakeholders. The following methods and approaches were used:

#### ***1. Workshops***

Most of the capacity building through sensitisation and information dissemination was done at workshops. In total, the NTF conducted:

- 8 workshops for the NTF and District Teams
- 12 district-level workshops
- 66 village-level workshops
- 4 Briefing Forums

## 2. Focus Group Discussions (FGDs)

These were used mostly during consultations with sector personnel. On average, four focus group discussions were conducted in each district, making a total of over 40 FGDs.

## 3. Key Informant Interviews (KIIs)

Key informant interviews were used during sector interviews. Kisumu District recorded a total of 15 KIIs, while other districts recorded at least 10. At the village level, village facilitators and district teams took advantage of the presence of the many people, some of whom are vested with indigenous knowledge and wisdom. They were able to consult such individuals to gain insight into issues to obtain additional information. Reports from the village and district indicated that in every village, there were at least two key informant interviews conducted.

## 4. Other informal sources of information

Facilitators and district teams used other alternative methods to gather information. This included talking to people informally, whether in public transport, in bars and restaurants, prayer meetings and churches. It was reported that people were generally willing to give information and be part of the process.

## **Activities**

The following activities were undertaken in Kenya to develop the Vision and Strategy for Management and Development of Lake Victoria Basin:

1. *Commissioning of the National Task Force: 20 December 2002:* The Permanent Secretary in the then Ministry of Environment and Natural Resources commissioned 16 members to serve on the NTF. A working group was mandated to adapt the International Consultant's work-plan into the Kenyan context.

2. *Identify Stakeholders: 14-18 January 2003:* The NTF held a three-day workshop in Kisumu. The workshop was attended by a total of 60 persons, drawn from a cross section of District representatives from the 12 sample Districts. The objective of the workshop was to internalise the purpose of the vision and strategy development, draw up profile activities/events of the process and draw up strategies. It was also a capacity building forum to prepare the National Task Force and District facilitating teams for consultation with the riparian community.

3. *Parallel District Forum: 22-24 January 2003:* From the Kisumu workshop of 14<sup>th</sup> – 18<sup>th</sup> January 2003, district teams of five (2 NTF, 1 DDO, 1 Facilitator, 1 CBS) moved to the respective district. While the district facilitating teams mobilized a total of 30 stakeholder representatives at the district, the NTF

finalized logistics and then moved to the district as well. In a two-day workshop, the 30 district stakeholder representatives deliberated on the vision development process, articulated it, and drew up strategies for holding consultations with the community at the village level. The workshop also identified sample villages, stakeholders at the village level and village facilitators. The District Facilitator together with stakeholder representatives drew up a map for mobilization of community members within the sample villages. Village facilitators were trained on methodology and tools to be used in the village forums.

Altogether the NTF and the district facilitating teams concurrently held 11 district workshops attended by a total of 330 participants (30 each). A total of 18 vehicles were used.

*4. Sample Village Forums: 27-29 January 2003 (some dates varied):* The NTF and district teams organized and held village forums at the village level in each of the 11 districts (refer to the Map on page 7) to provide a forum for people in the villages to participate in discussions to formulate community visions and strategies for the management of Lake Victoria basin and its catchments.

At the end of village consultations the following had been accomplished:

For two days, there was an incremental participation in the village consultations with overwhelming results:

A total of 66 workshops were held concurrently in 6 villages in each of the 11 participating districts.

A total of over 8,000 people attended the workshops (130 people average in each of the 66 workshops).

*5. Sector Interviews: 27-29 January 2003:* While the District Facilitating team and village facilitators were going on with village consultations, the NTF conducted sector interviews with policy makers and other development partners on sector management. Sector interviews ran concurrently with village consultations. Results from sector interviews indicated as follows:

A total average of 110 interviews (approximately 10 per district in 11 districts) were conducted using key informant interviews and focus group discussions.

*6. Compiling Village and District Reports: 30-31 January 2003:* The NTF and District Facilitators spent 3 days to produce comprehensive district reports.

*7. Cross Village District Consensus: 3-4 February 2003:* Each village selected 2-3 representatives drawn from different interest groups in their village to support the views they had discussed during the village forms and to present them at the cross village forum at the District. The NTF also shared preliminary reports from sector interviews. District consensus was sought on district priorities.

8. *Sharing Reports From the District: 6-7 February 2003:* District reports were shared in a 2-day workshop. A total of approximately 59 people including all the district teams met and shared district priorities before a small team was mandated to harmonize all the views from the district and draft them into a Kenya Country Vision and Strategy Report.

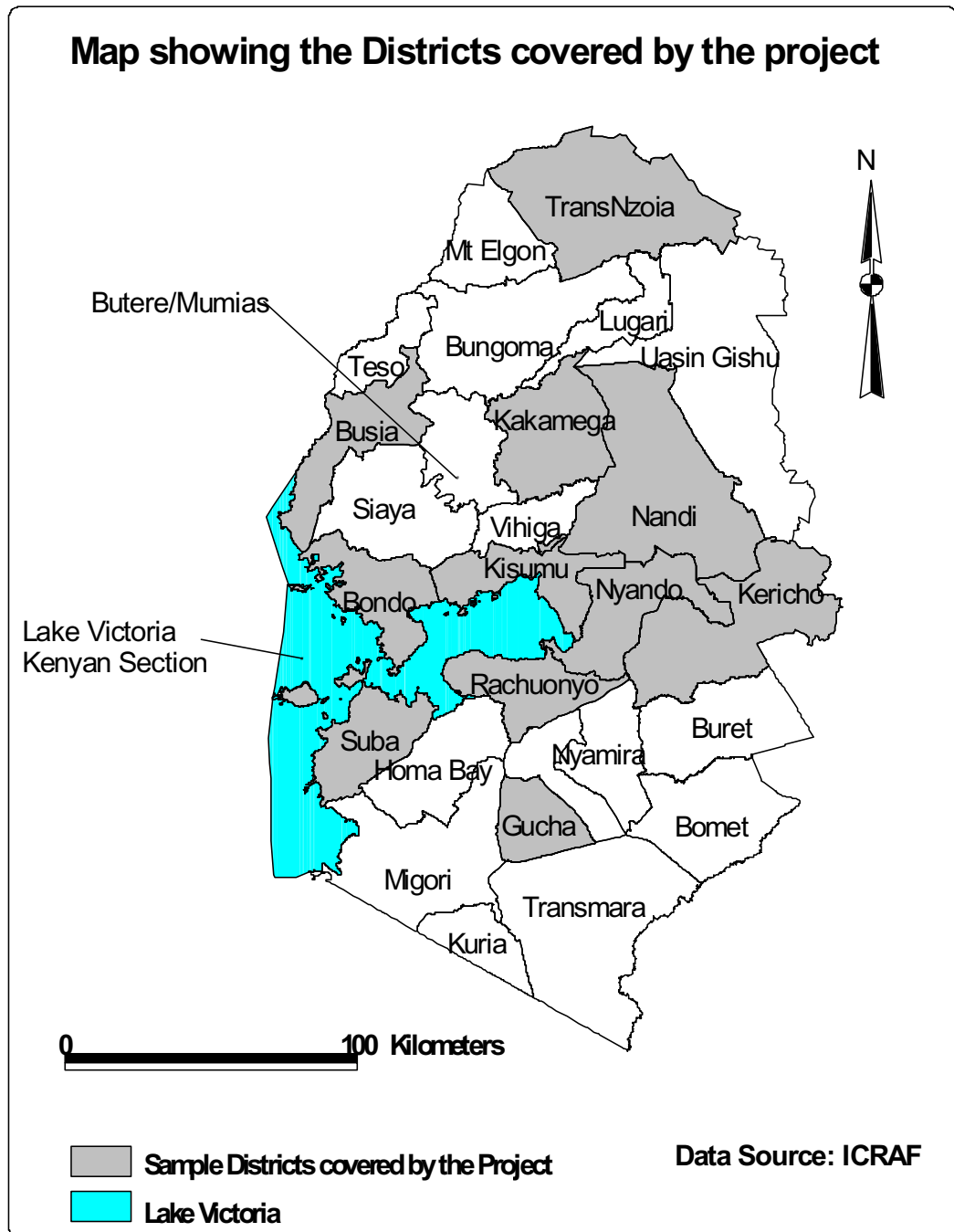
9. *The Drafting Team:* The Drafting Team spent three weeks sifting through information gathered from the districts and villages. First, the team extracted sector issues from the reports. In total, the reports presented several sectors. Each of the of the sectors and issues were subjected to the five thematic outlines in the International Consultant's Report Framework, including: natural resources; ecology and environment; socio-economic and demographic impacts; governance, policy and institutions; and gender concerns. The process also examined suggested vision and strategy statements. Gaps and other emerging issues were identified and noted. The team then drafted the vision and strategy report according to the framework provided.

10. *Validation of Report:* The initial draft document was presented by the NTF at a validation workshop in Kisumu. During the workshop, participants that included members of the district teams and other invited stakeholders, scrutinised the document and unanimously ratified it as representing the views expressed by the community and stakeholders.

11. *Presentation of the Initial Draft Document in Arusha:* The NTF then presented the document at an East African Regional Conference in Arusha, Tanzania.

12. *Re-writing and Editing Team:* After comments from the validation workshop and the Conference in Arusha, a team comprising the Chairman of the NTF, the Government focal point person and a local consultant wrote new sections, re-wrote the existing ones and did the editing to produce the final document.





# Chapter 3: Threats and Challenges

## 3.0 Introduction

Lake and river basins are fundamental parts of the natural, social and economic systems and feature prominently in policies for land, water and environmental management. Policy, institutional, social and economic processes within a given environment impact differently on the natural resource base of a system causing changes in resource availability and services. The magnitude and reality of social processes, propelled by rapid population growth with its accompanying increasing patterns of demand for environmental goods and services, could therefore pose potential threat if not guided by sound policies that ensure sustainability in resource use.

This chapter discusses the issues affecting the lake basin and catchments community as they continue to interact with and draw goods and services from the natural environment. To create a better understanding of the relationship between the different sector development agenda and the natural, social and economic systems, a theme-sector analysis is applied in presenting the impact of issues as identified by the community. In general, the communities did identify 14 sectors that formed points of interaction in their bid to eke out a living. For convenience sake, these sectors have been collapsed to six thematic areas to facilitate analysis of the issues emanating from all the 11 Districts that participated in the process. The thematic areas of focus for this analysis are;

- Socio-economics and demographic impacts
- Natural Resources
- Ecology and Environment status
- Governance, policy and Institutions
- Gender Concerns
- HIV/AIDS

In each of these thematic areas, the focus of discussion is on issues affecting the lake basin and catchment community within specific sectors of concern, drawing highlights on their impact on the regions development.

## **Theme 1: Socio-economics and Demography**

Lake Victoria Basin is endowed with enormous natural resources. These include human resources, minerals, forests, and fishery resources, among others. The region also boasts of climatic conditions ideal for various socio-economic activities. Other advantages associated with the basin are its strategic location relative to other sister states in the East and Central African region and communication network, albeit in a rather dilapidated state.

The region has a population of 11 million people (or one third of the total population of Kenya) inhabiting the 27 districts within the Basin. It is traversed by major rivers that flow into the Lake Victoria. It receives an annual mean rainfall of between 1077.4 mm and 1933.9 mm for the lower and upper catchment's districts respectively. The Lake itself is a vast ecosystem of fisheries resources and other marine life providing home to a wide range of biodiversity, both fauna and flora. Other major socio-economic activities in the region are in the agriculture and livestock, tourism, industry and commerce, the infrastructure, forestry, health and education sectors.

In spite of these glaring resource endowments, the Basin is faced with major challenges and threats. Poverty levels in the Basin stand at an average of 63%. The Basin has also suffered a continuous environmental degradation over the years, manifesting in deforestation of the catchments and the subsequent loss of land productivity due to sheet erosion, siltation of the available water bodies thereby reducing their capacity and the water quality, the latter being aggravated by other forms of pollutants like the industrial effluents and discharge from the sewerage systems just to mention a few.

Other challenges facing the basin are in the form of pressure exerted by the growing population on various economic units such as land resources and social amenities like education and health. Adding to this, the Basin also faces threats from such natural phenomena like climate change resulting in severe floods and intermittent drought situation. On the whole, therefore the exploitation of natural, social and economic systems against the backdrop of poverty brings to bear the cosmic relationship between poverty and environmental degradation.

The problem of communicable diseases also poses a unique set of challenges to the region. The HIV/AIDS pandemic has a high infection rate of about 30% especially among the productive age group (17 – 50 years). Other diseases that pose a threat to the Basin's populace include malaria, tuberculosis and cholera.

Through interaction with the communities from the 11 Districts that formed the catchment area of the Vision and Strategy Development process, however, it was clear that the communities had a determination to forge ahead and reverse these trends. The Lake Basin community is conscious of its past heritage, which, admittedly consisted of a wealthy natural resource base managed through sound value systems in a sustainable manner. The community has persistently observed deteriorating trends over the years in almost all the sectors of the economy, courtesy of governance systems and structures

engineered and controlled from the top. In each of the district, the communities lamented the state of the economy and the emerging adverse social issues, which threaten to destroy the much cherished value systems that have upheld the communities' social fabric and guaranteed them the harmony with their economic base. Below is a summary of the communities' concerns with respect to each sector.

### **Water Sector**

The Basin is endowed with abundant water resources in the rivers, streams, dams, and pans and in the Lake. The high precipitation in the higher portions of the catchment contributes significantly to the waters of the Lake. It is regrettable, however, that much of the water has continued to wreck havoc in the form of floods during the rainy season, destroying life and property. Communities residing in Nyando, Busia, and Rachuonyo Districts reported higher incidences of flooding with conditions worsening every year.

During dry seasons, however, the lower parts of the Basin experience perennial problem of water shortage due to drought. The Communities interviewed noted that water, though abundant in the basin, is scarce both in space and time. This results in the following threats in the development and management of the water sector: -

- Uneven distribution of the water resources posing a potential for conflicts and leading to wastage of time in search of the commodity and thereby denying the populace the opportunity to effectively engage in other income generating activities;
- An ever reducing capacity of the water sources due to siltation arising from the destroyed catchments and hence leading to flood situations and subsequent destruction of life and property.
- Deteriorating quality of water leading to water borne diseases thereby significantly affecting the health of the population especially children; and
- High cost of the commodity dictated by vendors especially during drought and in the urban areas.

### **Fisheries Sector**

Fisheries are the second most important activity among the people living around Lake Victoria, after agriculture. It is a major source of protein for the people. It also provides incomes for the families through the sales in the local markets and beyond.

But the situation is getting worse with the fish stocks dwindling as a result of over-fishing, exploitation of the fisher folk by the "middlemen", and the poor marketing and distribution infrastructure. The net result has been that the region's population, which has expanded rapidly in recent years, does not derive the nutritional and revenue benefits from fish consumption and exports. Most of the fish harvested is exported outside the region, and the little that remains is too expensive for them to buy. The "middlemen" purchase the fish at throwaway prices, deep-freeze it, and transports it to their factories for processing.

Most fishing though highly competitive, is handled through weak fishermen's cooperatives, which administer the sales. The fishing methods used include "**Ochwado**", "**Rongga**", which lead to depletion of fish stocks.

To an extent, small-scale fishing using baskets and hooks has changed to larger scale modern methods and boats. Added to this is the use of non-recommended fishing gears, which have the potential to clear up the fishes.

Thus the communities identified the following as the major threats to the development and management of the fisheries sector:-

- Inadequate infrastructure to provide an enabling environment for the fisher folk. Fish being a perishable commodity requires such gadgets as deep freezers and infrastructure development in the form of accessible roads and electricity to ensure efficient trade in the stock;
- Inappropriate marketing arrangement that favours middlemen and an unstreamlined policy and institutional framework;
- Attitude and cultural practices that render the fisher folk prone to the dangers of drunkenness and HIV/AIDS. The fishing community often indulges in an inherent culture of leisure and pleasure without due regard to saving and investment;
- Dwindling fish stock as a result of heavy commercial fishing; and
- Limitations of fishing arising from territorial boundaries that do not regard the common lake ecosystem for the fisheries resources.

### **Human Resources and Employment**

The region has, in the last two decades been registering poor trends in this sector with unemployment rates. A number of factors are responsible for this unfortunate trend, notably the poor performance of the economy and the rising population growth. The expansion of relevant institutions in human resource development has not kept pace with the rising population growth. The result has been increasing trends of insecurity and rural urban migration in search of alternative means of livelihood, among others.

The high cost of education has led to reduced access to education and increasing number of school dropouts. The children who drop out of school end up in child labour in their quest for livelihood. The declining access to quality and affordable education gives rise to high levels of illiteracy and ignorance among population.

The region experiences high unemployment rates, increasing poverty levels and lack of capital to venture into self-employment. Per capita incomes of people are very low and hence have limited purchasing power. Statistics indicate that more than 65% of the population live on less than one dollar a day.

Employment is not guaranteed after qualifying from an educational training institution. There are many graduates from different education institutions, primary, middle level and tertiary, who are unemployed. The human resource base in the region is therefore under-utilised and underemployed, which presents a huge untapped potential.

The threats to this sector therefore can be summarised as follows: -

- Inadequate number of skills development institutions;
- Declining employment opportunities consequent upon the closure of major industries on the basin and the collapsing of the major export crops (sugar, tea, coffee, etc); and
- System of education that emphasises “white collar” jobs, leading to rural urban migration and hence heightened insecurity in urban areas.

### **Mining Sector**

Geophysical data indicates that a number of mineral deposits exist in various parts of the basin. However, the ongoing mining activities that were reported involved gold prospecting in Kakamega, stone quarrying and sand harvesting in various parts of the Basin.

People involved in the mining activities in most areas of the lake basin are exposed to great occupational risks arising from the crude methods employed. It was for instance reported that frequent accidents have occurred in the gold mines of Kakamega, resulting into death in most cases. Prospecting on the limited gold reserves has itself created a sense of insecurity in the area, with unscrupulous traders taking unfair advantage of the miners.

The high levels of unemployment has driven the youth to engage in sand, quarry stones and murram harvesting activities, often with little or no skills at all. This, coupled with the absence of appropriate technology, has contributed to the high levels of environmental degradation witnessed in these areas. Even where the technology would be available, most miners lack access to credit that would enable them to acquire such technology.

Some communities recorded increased involvement of children in mining activities with the resultant high school dropout rates. This was attributed to the high death rate of parents from HIV/AIDS related ailments, which left the children to fend for themselves.

The threats in the mining sector are:

- Inadequate enforcement of the existing regulation to forestall the dangers associated with the mining activity, including the resultant environmental degradation;
- Lack of a support mechanism to the enthusiastic miners, especially with regard to marketing, finance and technological support.

### **Tourism and Wildlife Sector**

A high potential in tourism exists in the Basin, ranging from wildlife to scenic sites, some of fundamental cultural significance. The Lake itself offers an intriguing site with strategically located beaches.

In most districts, competition for space between wildlife and human settlement was evident. Communities complained of wildlife destroying their crops, particularly Hippos.



Game meat has been a delicacy in most communities, and hunting of Impalas and other forms of wildlife, though restricted, still continues especially within the communities residing next to the Parks. This is not the only threat to the wildlife, as some communities reported moderate use of animal hides and skins, which is often sold to external traders. In some instances, attacks by rogue Hippos and Crocodiles have prompted communities to eliminate such wildlife whenever spotted, considering them dangerous to human survival.

The exploitation of the lake for tourism has been largely untapped. The Lake transport system is not well developed with inadequate safety and disaster response mechanism thus discouraging the growth of tourism.

Most communities did not seem to appreciate the value of tourism, seeing no immediate benefit hence no incentive to protect natural habitats and wildlife. In Kisumu, for instance, it was recorded that in some areas local residents have turned unfriendly to the wild animals, hunting them at any given opportunity. Some communities feel that gazettement of large chunks of land for Nature reserves/parks has denied them access to livelihood resources such as grass, firewood, pasture, timber and agricultural land.

The challenge for this sector is how best the noble concepts of tourism can be harnessed and infused into the minds of the communities to popularise the sector. It will also be necessary to minimise the wildlife – human conflict brought about particularly by the destruction of the crops by hippos around the lake.

### ***Agriculture and Livestock Sector***

The region is well endowed with good agricultural land supported by favourable climatic conditions in most parts. Nearly all households in the rural areas practice some form of agriculture ranging from subsistence farming to cash crop production. Common food crops include maize, sorghum, millet, potatoes and cassava; cash crops grown include sugar, cotton, tea and coffee. Horticultural farming is also gradually picking up. Household land holdings is generally declining with the continued growth of population resulting in sub-division of farms, often to non-economic units at the behest of cultural expediency. The declining value of cash crops is as a result of the unfavourable policy framework that has impacted on the sector negatively in the whole community. There is also a huge potential in irrigation that has so far not been fully tapped.

Livestock production varies from district to district. Generally, a significant number of cattle, goats, sheep and chicken would be available in most rural households. Keeping of grade cattle is also increasingly picking up. However, there is low adoption of high yielding livestock breeds and crop varieties.

The sector however, has a number of challenges and threats that the communities cited. Below is a summary of such challenges: -

- There is poor marketing of produce; unexploited marketing channels and poor infrastructure for processing agricultural produce such as grains, milk, meat and

coffee. The livestock bred in the basin rarely find ways to external markets. Most foods produced from farms are mainly for subsistence.

- There is rampant poverty in the region as a result of reduced crop yields, dwindling fish stock in Lake Victoria and poor valuing of the indigenous natural resource base. Existing resources are unable to support and meet the existing needs for survival. There are frequent food shortages in between harvesting seasons.
- The cooperative movement is weak and the local communities lack access to credit facilities to farmers and other resource users such as processors of farm produce. Farmers are unable to secure farm inputs to undertake agricultural investments. Limited processing and preservation capacity often results in heavy losses especially for horticultural crops such as mangoes, potatoes, and tomatoes.
- There is a limited quantity of labour for agricultural production. Extended school life for the youth means very few hands are available to work in the farms. Furthermore, students have become increasingly lazy with negative attitudes towards agriculture. There is also limited support from the Government. The communities noted that there are no Agricultural Extension Officers as used to be the case in the past. HIV/AIDS pandemic rob the area of a significant percentage of labour force.
- There is high cost of farm inputs and machinery for very limited returns for money spent.
- The communities are not secure in food in both quantity and variety. Most children suffer from malnutrition due to low productivity and food shortages.
- Retrogressive cultural practices sometimes lead to delays in land preparation and planting of crops. These are the traditional norms and taboos- “**kweche**” among some communities.
- Cotton ginneries collapsed when communities abandoned cotton cultivation due to delayed or non-payment for produce delivered. The same is true of daily farming and subsequent collapse of KCC. Similar tendencies threaten sugar cane growing/ industry and maize. There are also limited rural agro based industries.

### **Sports, Recreation and Culture**

Interaction of traditional value systems and modern lifestyles has led most communities to a state of confusion and apathy in several respects. The much adored value systems enshrined in the cultural beliefs and practice are being replaced by western lifestyles and mind sets which characterise the youth. The result is a “generation gap” between the youth and the elderly on the one hand and the urban and rural folks on the other. This state of affairs poses some specific challenges and threats, which are noted below;

- Sports and other social activities in the present society have lost the traditional value as a pastime engagement. Sport is now viewed as an income generating

activity rather than for recreation. The commercialisation of recreation and sport leads to high costs hence discouraging sports.

- q The erosion of traditional cultures is rampant due to the aping of western lifestyles thus distorting traditional society's values and norms. The most vulnerable group is the young generation. The practice results in social tensions in families and the community at large. The mass media has been the main catalyst in this observed erosion of local culture and values. The media has become the society's pacesetter with enticing advertisements and movies. The result is general moral decadence and loss of societal fabric.
- q The society's changing value system is manifested by the culture of over-exploitation of resources, selfishness and self-centeredness, aggression, indiscipline, inhospitality and destruction of environment. The value of hard work and stewardship is gradually getting sacrificed.

### **Physical Infrastructure**

The natural location of the Lake Victoria Basin in terms of communication linkage with the other partner states of the East Africa Community is strategic. All aspects of communication – road, rail, water or air – have high potential for development, thanks to the achievements of the defunct East Africa Community.

Communities interviewed noted untapped potential in this sector and cited specific threats and challenges to the sector as follows:-

- q The poor condition of the roads leads to high rate of breakdown of vehicles, resulting in high cost of road transport. In cases of perishable products like fish the losses are higher due to lack of transport to find alternative markets before fish perishes. Other perishable products such as horticulture suffer similar fates.
- q Lake transport by boat is very irregular and some of the boats are not motorized. This is in addition to very limited lifesavers or safety gears and rescue boats that are also made from poor quality wood. There is also high insecurity in the lake due to high rate of piracy exacerbated by inefficient boats and the presence of water hyacinth. Most of coxswains do not have any formal training.
- q There is low investment in the Sector, especially with respect to transport, leading to increased use of donkeys and bicycles as alternatives.
- q Most communities have limited access to information and power. They attributed this to the monopoly of both Telkom (K) Ltd and Kenya Power and Lighting Company to limited presence of mass media.
- q There is limited capacity of Kisumu Airport to handle cargo destined for the export market.

- The rail system is under-utilised placing too much pressure on the road transport especially by heavy commercial vehicles.

### **Health and HIV/AIDS**

Despite the Government's efforts, with the support for other organisations to offer health care to the people of the region, it has continued to register high mortality rate. Several factors are responsible for this, notably the high population overstretching the available healthcare facilities; prevalence of communicable diseases like malaria, TB, cholera, etc; low immune systems brought about by malnutrition; and HIV/AIDS pandemic.

The above scenario has led to the following issues cited by the communities as the threats in this sector.

- The high population growth rates in the region have meant that the few available health facilities cannot cope with the demand for healthcare. High poverty levels among the people complicates the situation further because the health facilities cannot be accessed by poor people due to the high costs of conventional drugs. This leads to the cyclic problems of high infant mortality and morbidity rates, high rate of death of expectant mothers, reduced productivity due to poor health status and increased poverty levels. There is a generally poor adoption of birth control methods.
- HIV/AIDS pandemic has given rise to high death rates particularly in the productive age (17-50 years) leading to serious socio-economic repercussions. Contrary to the norms, many households are now headed by women and children. There is a high school drop out rate and an increase in incidences of early marriages. Management of HIV/AIDS, both infected and affected is a major drain on resources.
- Despite HIV/AIDS awareness, there are some cultural issues, which hinder the HIV/AIDS control. Some communities still perceive HIV/AIDS as caused by witchcraft. There is low attitude/behaviour change and this is demonstrated by the practice of multiple sex partners, drug abuse, low moral restraint among the youth, wife inheritance, polygamy and the local brew "**chang'aa**" cheaply available at the beaches leading to high incidences of alcoholism, crime and immorality.
- Traditional herbalists play a critical role in healthcare, but have now become expensive due to the inability of the government healthcare system to offer quality service.
- The growth of urban centres and population growth has not been matched with the need for recreational facilities. Lack of recreational facilities and social amenities often leads to idleness and promiscuity resulting in spread of STIs including HIV/AIDS.

- Malnutrition is experienced among the population particularly children. This is attributed to low incomes, high poverty levels and lack of balanced diet attendant upon food insecurity.

### **Energy Sector**

The Lake Victoria Basin is poorly served with electricity and other forms of energy. The potential for energy, however, is high given the strategic falls along the major rivers draining into the lake and the abundance of sunshine throughout the year that is ideal for developing solar energy. Other potential energy sources that could easily be developed include wind and biomass energy. The adoption of these facilities in the rural areas has been at a dismally low rate basically due to the high cost involved and the high level of technology that makes it difficult to adopt easily. This leaves the community with the option of relying on wood fuel resulting in the destruction of forests.

### **Industry and Commerce**

In the past, industry and commerce have provided appropriate avenues for absorbing those in search of employment. The sector used to be vibrant resulting in the establishment of major industries in the region like KICOMI and Kenya Breweries Ltd. Besides, there were a number of ginneries spread evenly across the basin, offering jobs to thousands of youth and keeping the agricultural sector buoyant. All these industries, including two major sugar industries – Miwani and Muhoroni – have either collapsed or some under receivership. Even the emerging fish industry is threatened with collapse by extraneous factors.

The end result of this state of affairs was to have those in the working age group flock the jua kali sector that currently employs up to        people, with the attendant shrinkage of income, which in turn depresses the development of commerce. The limited agricultural produce and products from the jua kali sector end up with no effective market that can sustain production.

The communities decried the adverse policies that constrain the development of the agricultural sector thereby impacting negatively in the industry and commerce. They also castigated the existing trade malpractices by cartels that exploit the prevailing circumstances to their maximum advantage resulting in the continued marginalisation of the rural communities.

### **Forestry Sector**

The population of lake Victoria basin and catchments has rapidly expanded in the last decade putting immense pressure on the forest resources. Apart from the direct exploitation of forest trees, the communities reported an increase in demand for human settlement in the areas previously reserved as forestland. Where such settlement has been allowed, as witnessed in parts of Gwasssi hills, Tinderet and Mau forests, it has often been accompanied with demand for farmland, encouraging further encroachment into the forest.

Communities in Kericho particularly cited the fact that foreign investors had continued to clear large chunks of indigenous forestland to allow for commercial farming. Some tracts of indigenous forests had also been replaced by commercial species of trees, in effect reducing the social value of the forest. Notable exploitation of forestland by indigenous small-scale entrepreneurs was also reported.

Most communities in the lake basin observed that the growing demand for fuel wood has not been matched with a commensurate turnover of affordable alternative energy sources, thereby leaving the forest vegetation as the most immediate source. This situation is particularly pronounced in the rural settings, which constitutes the larger percentage of the lake basin dwellings. Charcoal burning, both for domestic application and commercial use constitutes a major concern. Communities observed that this situation had reached the current destructive levels because of absence of proper control and regulation.

In a related instance, influx of population into neighbouring districts was reported as a contributor to pressure on forest resources. A case in mention was waves of population immigration from Kisii and other places in the lake region to Suba district. Accompanying the population influx is the rising demand for timber posts for housing construction. These homes once constructed remain highly vulnerable to destruction by strong winds, as most of the trees acting as windbreaks have been destroyed.

Communities, especially those in Kakamega, expressed concern over the reduced number of tourists visiting the Kakamega forest, citing its level of destruction mainly caused by the charcoal traders and saw millers. This had reduced the opportunistic income earning potential from the tourists by the local community. Commercial bee keeping, which previously thrived in Kakamega forest, has since been rendered uneconomical as most trees supporting this local industry have been destroyed.

In the fast urbanizing landscapes such as Kisumu, it was observed that housing demand had led to the destruction of hilltop trees and vegetation. Some possible pointers to this situation were mentioned as the low involvement of community in conservation measures, low awareness levels, and lack of meaningful benefits from forest resources to the urban community.

### **Education**

High poverty levels in the region have impacted negatively on the education sector with a myriad of socio-economic consequences. Low incomes as realised by the majority of the people has meant that there is limited access to education at primary, secondary and tertiary levels. Education is generally expensive in terms of school fees and other levies.

The limited access to education by the majority of the people leads to a vicious cycle of poverty and illiteracy. The high dropout rates especially the girl child, means that the resultant manpower is unskilled and unqualified. Out of school youth and (school dropouts) do not have skills training. The situation is compounded by the fact that there



are no programs or investment in skills development to address the generally low skills among the people.

High illiteracy rates lead to other problems of ignorance and disease and lack of opportunity to take advantage of other sectors of human development.

The high cost of education impacts more severely on orphans and other related vulnerable groups of the society. The phenomenon of school dropout in many instances has also led to child labour.

Education facilities and primary, secondary and tertiary levels are poor and inadequate. These facilities have not been expanded concomitant with rising population. Teacher staffing levels have not been addressed adequately in recognition of recommended teacher: student ratio with the result that quality education is compromised.

The relevance of curricula at various levels has been questioned. Generally, teachers seem to rely on a theoretical rather than practical teaching methodology bringing into question the caliber of pupils/students graduating from institutions of learning. Further, there is a noted decline on extra-curricular activities leading to students who may not be prepared holistically, mentally, emotionally, physically and spiritually.

There is observed increase in anti-social behaviour, immorality and indiscipline among the youth, both in and out of school.

It was also observed that inadequate funds are set aside for research in education. Where limited research has been done, implementation of research findings has not been effected. There is inadequate adoption of appropriate technology and curricula.

### **Conclusion**

The socio-economic and demographic situation in the Lake Victoria region (Kenya) is very grim. The population growth rate is high, despite the prevalence of HIV/AIDS pandemic, malaria and cholera. The high rate of population growth implies that the proportion of younger people is much higher than that of the older economic active people. This implies that dependency ratio is very high, especially as a result of AIDS orphans.

The high rate of school dropouts indicates that the level of illiteracy is high. Moreover, owing to the lack of industrial establishment, the level and rate of unemployment is quite high. Some young people in the region have resorted to fishing and informal trade as alternative means of employment, but these sectors have their own problems too: declining fish stocks, over-fishing, poor marketing and transport infrastructure and lack of policy framework and financial support for the latter case.

The most unsettling situation is that the young people, faced with the above-mentioned problems, have become apathetic, indifferent, frustrated and crime-prone. Alcohol

consumption has taken over in the life of these seemingly hopeless young generations. Other forms of drug abuse are also widespread.

The starting point to deal with most of these socio-economic and demographic impacts is to create employment opportunities through revival and revitalization of the collapsed industries in the region, e.g. cotton, sugar, molasses, breweries, milk, maize fishing, etc. Roads and communications infrastructure should be rehabilitated.

## Theme II: Natural Resources

The Lake basin has a vast natural resource base ranging from the abundant quantities of fresh waters of lake Victoria, rivers and springs to the forest and wildlife resources in the plain, plateaus and highlands of the region. Aquatic resources are also plenty with the most sought after being fish, a major source of protein as well as a principle economic good. The hinterland has a good climate and rich soils with a high potential for agriculture.

Kenya's economy is natural resource dependent and this has placed immense pressures on them. In the past, the adoption of a capitalistic economy led colonial<sup>1</sup> and post-colonial governments to aggressively promote privatisation of land for economic prosperity. As a result, resource tenure has gradually shifted from communal ownership to government or private ownership. In the long run, the collective responsibility to look after these resources, as a common good was diminished and individual gain prevailed over community interests.

The land tenure reforms coupled with a rapid population increase have intensified land use in the Lake basin. Most of the natural resources in the region have become commercialised and the demand for their exploitation has increased tremendously. Further, colonial interventions on natural resources promoted mandatory soil, water, forest and wildlife conservation measures leading to hostility towards these practices and their current low adoption rates by communities.

The recent development trends and the new challenges reminiscent of such trends constitute a threat to this vast natural resource base. These threats and challenges are presented in the sections that follow.

### *Water Sector*

The sources of water in the lake basin and its catchments are numerous including rainfall, rivers, ponds, lakes, boreholes, dams, piped water, roof catchment, wells and springs. A majority of the residents in the region heavily depend on water from springs, streams, and rivers for their domestic consumption (see map in Appendix IV Pg. 76) while agriculture is largely rain fed.

The Lake Basin communities recognise that:

Despite the numerous sources of water in the Lake Victoria region, the population still experiences acute water shortages especially during the dry season. Likewise, drinking water supply is inadequate, and where available, it is presumed unsafe and polluted. The absence of clean and safe drinking water in the presence of abundant fresh water of the lake and the many rivers and streams that feed into Lake Victoria poses great challenges for the region's development.

The communities resident in the region have not managed the water catchments in a sustainable way. The water catchments have been extensively degraded resulting in low water levels in rivers. Moreover, there has been over-abstraction of ground water coupled with the planting of eucalyptus trees along watersheds, which has affected the

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<sup>1</sup> The Swynnerton Plan of 1955 introduced an individualised tenure security in Kenya to stimulate farm investment, agricultural growth, and the emergence of a land market.

water levels. These factors have been aggravated by a shift in climatic conditions and rainfall patterns have become unreliable. Clearly, there is dire need for protection of water resources in the region and to ensure an adequate supply of clean water all year round.

### **Fisheries Sector**

The Lake produces about 170, 000 metric tonnes of fish every year (ICRAF, 2002)<sup>2</sup>. This resource has been given prominence due its huge potential for contributing to the economic advancement of the region and providing food security for the Basin's population. About forty years ago, the fish resources in Lake Victoria were abundant. It has been estimated that there were possibly as many as 400 endemic fish species in the lake at that time which were approaching extinction by 1980 (Witte et al., 1992)<sup>3</sup>. Currently, only three (3) species are harvested for commercial purposes namely, the Nile Perch, Tilapia and Sardines ("**Omena**"). A high rate of depletion of fisheries resources is registered and some species such as **Ningu, Fulu, Okoko, and Kamongo** are on the decline.

The communities advanced several reasons on species decline.

These include:

- The Nile Perch, which was introduced into Lake Victoria in the 1950s, has eaten most of the endemic fish species leading to a reduction in species.
- Overexploitation by large-scale commercial fishing using trawlers that specialise in Nile Perch fishing for export.
- An upsurge of fishermen due to limited employment opportunities elsewhere and retrenchment of public servants who on returning home joins the fishing industry.
- Inappropriate methods of fishing have been used that target specific species such as **Rimba, Ochun, Tandarazi, Tupa Tupa** and not providing a break to allow for breeding.
- Water pollution was identified as a source of fish deaths in the Lake. This emanated from agricultural and industrial residues as well as malfunctioning sewerage treatment facilities in the urban centres bordering the lake.

A system of frequently monitoring fish stocks and habitat conditions is required to ensure that trends on resource use and availability are registered. The challenge lies in a comprehensive management plan of the fish resources through catchments protection to ensure that upstream sources of pollution are minimised and on-source pollution discouraged.

2 ICRAF, 2002. «Improved land management in the Lake Victoria Basin: Linking land and lake, research and extension, catchment and Lake Basin». *Final Technical Report. Start-up Phase July 1999 to June 2000.*

3 Witte, F. al., 1992. «The destruction of an endemic species flock: quantitative date on the decline of the haplochromine cihlids of Lake Victoria». *Environ. Biol. Fisheries* 29: 1-28.

### **Mining Sector**

The mining sector in the lake basin region has been mainly confined to sand, clay, murrum, soapstone, quarry stone, limestone and rock harvesting. In recent times, clay-harvesting activities are reported to have intensified due to increased demand for pottery products and clay bricks for construction of buildings. On the same breadth, the demand for murrum and building stone has also increased tremendously.

The community members noted that region has a potential for mineral resources. In Rachuonyo, it was reported that the availability of “marble stone” which is mined for export to Uganda.

In Kakamega and Migori Districts, gold deposits have been exploited for years though at a minimal scale.

A common concern in all these mining activities is the crude means through which the extraction or harvesting processes are conducted. Most of the sand harvesting is carried out from the riverbed deposits in low-lying areas where the water velocity is low enough to pose minimal danger to the harvesters. Such harvesting activities are not well regulated; in fact in many cases, the harvesters are constituted into loosely formed groupings that regulate themselves. This has had adverse effects on the environment such as landslides during the heavy rains.

The communities appreciated the fact that these minerals are non-renewable; therefore, their efficient extraction is crucial with a focus on mine rehabilitation and restoration.

### **Wildlife**

Natural landmarks and a host of wildlife diversity are common features in the lake basin. Some of the wildlife found in the lake basin region includes hippos, impalas, rhinos, monkeys, baboons, buffalos and hundreds of bird and insect species, mainly found in natural habitats.

Lake Victoria, the second largest fresh water lake in the world and its islands are a spectacular part of the region, which host a number of aquatic resources.

The communities around the lake attach a lot of myths to the existence of some of the natural features and wildlife species. For instance, myths were expressed surrounding the formation of “*Simbi Nyaima*” in Rachuonyo, “crying stones” in Kakamega, Ndere Island in Kisumu, just to mention but a few. These mythical beliefs have safeguarded the natural features, protecting them against destructive human practices.

The communities observed that a lot of wildlife had migrated from the area, a factor they attributed to the changing climatic conditions and human destruction of forests and natural vegetation. In some instances such as observed in Kisumu, whole families of Impalas and Baboons had to be relocated to Deer Island to protect them from

increasing urban pressure. Poaching was mentioned as the biggest threat to wildlife in the region.

It is largely recognised that the tourism potential of the lake region has not been fully exploited. Further, documentation on the historical sites and other features of touristy value is scattered and not packaged in a manner that would effectively promote tourism. The communities recognise this as a loss of income earning opportunity, some closely linking it to the escalating poverty levels in their districts.

### **Energy Sector**

The lake basin has various natural sources of energy that include water, solar, wind, fuel wood and refined fuels. Hydropower has been widely used to supply electricity that is mainly confined to the urban centres. Solar and wind energy remain largely unexploited, though the potential is enormous.

In the past, biomass energy resources were used on a large scale for industrial production and to build the Kenya-Uganda railway line. These activities cleared trees from large tracts of land.

A principal source of domestic energy is fuel wood and charcoal, with recent ventures in the use of cow dung and other biomass wastes. Such forms of energy supply, though affordable, have exposed the users to various acute respiratory infections while depriving the soil of nutrients replenishment. This dependence on biomass energy poses great threats to natural resources.

The grid coverage through rural electrification programmes is not sufficient and has not extended to the beaches or the rich agricultural hinterland, which are major production units in the region.

A heavy reliance on traditional fuels presents great challenges to the existence of natural resources and programmes that would shift focus from them ought to be promoted. At the same time those interventions that promote efficient energy utilisation are required.

### **Forestry Sector**

Forest resources in the lake Victoria region are under immense pressure from various sources such as settlement, agriculture, pasture, domestic and industrial energy use, agriculture, and timber manufacturing. These resources have gradually declined over the years. Kenya currently has less than 2% forest cover compared to 30% after independence (Kenya Forest Working Group, 2002).

Indeed, most of the people of the lake region reflect back to a time when rainfall was in abundance, herbal medicines readily available, plentiful fuel wood supply within easy reach of the community and wildlife teeming in the forested areas.



In most of the Districts in the lake Victoria basin, residents described large tracts of bare hilltops previously covered with indigenous forests. Forest trees have been indiscriminately felled to provide timber for building and construction as well as domestic firewood. In a significant number of cases, forest fires have consumed large expanses of forested land leaving behind large tracts of bare land often exploited for farming. These practices have destroyed the species that depend on the forest as a habitat.

The Suba District community residing along Gwasssi hills presented a particularly grim scenario. They observed that incidences of frequent fires are on the increase due to farmers encroaching into the higher areas often applying the slash and burn methods to clear the land. This destructive practice has not spared the high value trees such as fruit trees and ornamentals, denying the communities such values accruing from this type of forest vegetation.

As a consequence of the depleted forest cover, the communities of the lake region are experiencing reduced amounts of precipitation and unreliable rainfall patterns. Those living on the hill slopes are constantly faced with the threat from the increased run-off during the rainy seasons, often having devastating effects on their crops and sometimes destroying homes. Some farmers attributed the current low crop yields to reduced soil fertility caused by the bareness of the ground and lack of humus from the trees and forest vegetation. Those communities in the low-lying districts such as Nyando, Kisumu, Bondo and Rachuonyo complained of frequent flooding episodes attributed to increased run-off from the bare areas in the catchments. An increase in the formation of gullies due to soil erosion was also reported.

The disappearance of medicinal plants previously found abundantly in the indigenous forests has caused great concerns among the communities residing in the higher lands. Common ailments, especially those affecting children, are now not easy to manage at home using traditional methods and most communities attributed the high infant mortality to the reduction in herbal medicines.

A concerted effort is required to conserve the remaining forests and alternative sources of tree products should be sought.

### **Conclusions**

It is evident that the natural resource base of the Lake Basin is faced with continuous stress from various avenues of exploitation, all indicative of unsustainable patterns. If the current trends were not reversed, the natural resource base in some sectors would be faced with eminent extinction, worsening the current poverty levels in the region<sup>4</sup>.

Further, the Welfare Monitoring Survey in 1994 estimated that the incidence of 'hard core' poverty was between 40 – 50 % in Bungoma, Busia and Kericho Districts and 30 – 40 % Bomet, Nyamira, Vihiga, and Kakamega Districts in the Lake Basin<sup>5</sup>.

<sup>4</sup> Nyanza province, which forms a large part of the basin, is reported to have the highest incidence of poverty in Kenya rated at 63% in 1997, marking the most dramatic increase (50%) within three years (1994-1997). This figure is above the national poverty incidence average of 52%.

<sup>5</sup> The Central Bureau of Statistics defines hard core poverty as the total expenditure of less than Ksh. 703 per adult equivalent per month (CBS, 1994).

These natural resources are under continuous pressure from increasing social and economic needs. A combination of technology advancement, controlled exploitation and diversification presents a plausible avenue of response to this stress factors.

An encouraging factor however is that the level of degradation and depletion occasioned by unsustainable consumption and exploitation patterns has not reached irreversible levels, allowing room for corrective action.

## Theme III: Ecology and Environment

The Lake Victoria Basin has experienced significant changes in its ecology and environment in the last 40 – 50 years. Some of the studies done indicate that there is a post-1960 ecological shift in Lake Victoria resulting from environmental degradation (Strager *et al.* 1997)<sup>6</sup>. Recent historical records depict an extraordinarily fluvial period occurring from 1961 to 1964 in the eastern portion of the lake where the water level rose by about 2.5 metres. This was accompanied by increase in discharge from rivers Nyando and Sondu – Miriu that rose by 10 to 20 times more than their respective 35-year decadal averages (ICRAF, 2002)<sup>7</sup>.

Within the same period, rapid eutrophication occurred with phosphorous levels increasing two to three fold (Hecky, 2000)<sup>8</sup> and algal concentrations three to five times higher than before (Johnson *et al.*, 2000)<sup>9</sup>. These conditions favour the dominance of nitrogen fixing cyanobacteria and the spread of aquatic weeds such as water hyacinth.

These changes have been attributed to a rapid population increase, climate change, and intensive economic and industrial activities. The drastic transformation of the Basin's landscape into various land uses such as agriculture, industry, settlement, urbanisation, and pastoralism has had a significant impact on its natural state.

A well-managed environment in the Lake Basin is critical to the survival of both fauna and flora that depend on it. Further, the high dependence of the Lake Basin communities on land and water resources for subsistence and economic gain make environmental conservation issues significant to their continued existence.

### Water Resources

In Kenya, five out of eleven rivers that flow into Lake Victoria serve the Basin. These include Nzoia/Yala, Nyando, Sondu Miriu, Gucha and Mara Rivers. These river basins within Kenya receive a relatively higher mean annual rainfall compared to those in Tanzania and Uganda. They are more likely to be eroded due to higher average percentage slope and sediment transport capacity with the Nyando basin recording the highest average sediment transport capacity (Awiti and Walsh, 2002)<sup>10</sup>.

The community members noted that the waters of Lake Victoria, Rivers Nzoia, Yala, Nyando, Sondu-Miriu, Awach, Kuja and Migori are all polluted. The sources of pollution include increased cultivation along the river banks and upper catchments leading to soil erosion, encroachment into water sources, use of inorganic fertilizers and pesticides,

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<sup>6</sup> Stager, J. C. 1997. "A high resolution 11, 400 –yr diatom record from Lake Victoria, East Africa. *Quat. Res.* 47: 81-89".

<sup>7</sup> See Footnote 2.

<sup>8</sup> Hecky, R. 2000. "Eutrophication and Biodiversity decline in Lake Victoria, in Proceedings of the International Decade of East African Lakes (IDEAL)". *Second International Symposium*. January 10 – 13<sup>th</sup>, Club Makokola, Malawi.

<sup>9</sup> Johnson, T. C., K. Kelts and E. Odada. "The Holocene history of Lake Victoria". *Ambio* 29: 2 – 11.

<sup>10</sup> Awiti, A and Walsh, M. 2002. "Regional assessment of priority river basins", in *Final Technical Report. Start-up Phase* July 1999 to June 2000.

and agro-based industries which deposit their untreated effluent into the water bodies and the poor sewage disposal systems in the urban centres. This means that the waters that could support domestic consumption are now contaminated. The scale of pollution also affects local water bodies used by humans and livestock.

An increase in the siltation of rivers, degradation of riverbanks, and encroachment of wetlands have exacerbated the already deteriorating environmental conditions. Many areas are experiencing perennial flooding, water stagnation and increased soil erosion leading to poor quality and quantity of water in the region.

In the urban areas, poor construction of pit latrines is a source of underground water pollution leading to increased incidences of waterborne diseases.

The rapid population increase is not matched with an upgrade of waste disposal facilities. In Kisumu, the 35-year-old sewerage system has outstripped its capacity to support a population that has increased five fold.

The efficient management of water resources in the Lake Basin is a priority that should be addressed in future for improving the well being of the human and animal population in the region.

### **Fisheries Sector**

Fish production, health and habitat are affected by the state of ecology and environment. The poor state of ecology and environment in the Basin has polluted lake water, rivers and streams leading to many fish deaths and extinction. A number of factories in the basin are emitting harmful chemical effluents, inorganic fertilizers and herbicides used in agriculture and livestock rearing. These drain into the lake from upper catchments posing a great danger to the fish species. Some of the residents carry out their cleaning on the shores of the lake (cars, clothes, bathing, etc.) or at the banks of rivers and streams. These activities cause serious environmental threats to the aquatic life and deterioration of water quality.

Water hyacinth has also wrecked havoc on fisheries by interfering with fishing activities in the Lake. Some of the negative effects include impeding light penetration thus reducing growth of phytoplankton and herbivorous fish such as tilapia, reducing the diversity of aquatic plants and fish species, decomposition and sedimentation of rotting hyacinth, and increasing evapotranspiration (Ong'ang'a and Munywa, 1998)<sup>11</sup>.

Papyrus, a major product of the wetlands is dwindling. Despite being intensely utilized by wetlands communities to make handicrafts as a means of livelihood, its rapid decline due to high demand will further impoverish these communities and also destroy fish breeding sites.

As noted in the previous section, species diversity has reduced following the introduction of the exotic predator Nile Perch that altered the food web structure and habitat composition of the Lake.

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<sup>11</sup> On'gan'ga, O. and Munywa, K. 1998. "A rapid assessment of water hyacinth situation in Lake Victoria. Infestation current scale and trends". *Consultant Report*. OSIENALA.

Thus a well-coordinated environmental and ecological management programme that incorporates economic and conservation activities in the catchment areas and lakeshores is required.

### **Energy Sector**

This sector is heavily reliant on biomass energy with negative implications on the environment and ecology. Among most rural communities, the surrounding shrubs and existing woodlots are the principal sources of fuel wood and charcoal. Comparatively, the lowlands/plains towards the beaches are the worst hit since most woodlots and indigenous vegetation have been cleared. In the upper catchments of Bondo District, communities acknowledged that there is excessive use of wood not only for fuel but also as timber for building and furniture making. Already the scale of depletion through clearing is threatening in the entire lake basin.

In a very limited way, kerosene and some alternative sources of energy such as solar and biogas are used while electricity is mainly available in major urban centres.

The challenge lies in effectively harnessing energy sources that are more environmentally sound and encouraging communities to adopt on-farm forestry for their household biomass energy consumption and income generation especially from high value trees.

### **Mining Sector**

The rudimentary mining techniques employed in harvesting minerals have resulted to extensive environmental degradation. There are incidences of land parcels and hill slopes being rendered unproductive, natural habitats destroyed in the process of mining murram, stone minerals or other natural resources. Other adverse effects of these mining practices include miners' death and fragile ecosystems susceptible to further erosion.

The frequent blasting of rocks on the hill slopes have not only weakened the soil structure making land slides a common occurrence, but have also caused considerable damage to the ecosystem. The communities living next to quarrying areas in Kisumu particularly mentioned increased dust and noise pollution from the large quarries, observing that this had affected their health. There are many cases of wildlife displacement and houses weakened by blasting.

There is little effort made to rehabilitate the abandoned quarries. Most of them have formed ponds of stagnant water, which provide fertile breeding grounds for disease vectors such as mosquitoes. The flow and stability of rivers have been affected by over-extraction of sand from their courses leading to riverbed erosion and riverbank destruction.

In view of that, mining programmes that adhere to environmental protection mechanisms with attention to detailed environmental impact assessment are required.

### **Wildlife and Tourism**

There has been a steady decline in wildlife species and quantities and in some cases certain species in different parts of the lake basin are threatened to extinction. This undesirable pattern has been blamed on the poor planning and land management in which conservation plays a second fiddle to economic growth in the development plans. As a result nature reserves and vital natural habitats have been favoured for commercial use as the competition for space stiffens.

Wildlife in the parks is sensitive to increased traffic and human movement, which have had an impact on their natural habitats and breeding patterns. In most of the Districts in the Lake Basin, the communities observed an increased level of encroachment into the natural habitats such as wetlands in the lower lying areas next to the lake, riverbanks and forests in the higher areas.

The lake and river courses have not been spared either, their ecology has been altered by chemical effluent and the riverine species are at risk. Some communities attributed the disappearance of large families of Hippos in certain parts of the lake such as Dunga beach in Kisumu to pollution. Water birds that had a seasonal presence in parts of the lake are hardly sighted. Some fishermen mentioned that they no longer have tourists coming to take boat rides to see the Hippos, denying them of an important source of earning.

A balance is required between economic growth and proper habitat management for the protection of various wildlife species by ensuring that essential ecological functions such as the water and carbon cycles as well as other bio-geophysical processes are well maintained.

### **Agriculture and Livestock Production**

Agriculture is the economic mainstay of the region. The major crops grown include maize, bananas, beans, tea, coffee, sugar, rice, and cotton. The impact of crop and livestock production on the Lake Basin environment is prominent considering these activities are carried out on about 70% of the Basin's area. Most farmers have adopted modern farming methods that are aimed at intensive production to ensure high yields. There is a shift towards commercial agriculture and livestock keeping especially cash crop production under large scale monoculture and zero grazing of cattle with an adverse effect on crop and animal diversity.

Thus, an increase in levels of chemical effluents from farms due to escalating use of chemical fertilizers, pesticides, preservatives and agrochemicals in farms was noted. These practices have altered the physio-chemical formula of soils and degraded the farms leading to reduced fertility and productivity.

Most forested areas including the ones on hills and land set aside for specific use like road reserve, recreation, public utility have been encroached leaving soils exposed to erosion. Notably, Koderia and Wire forests as well as Ruma National Park have been opened for agricultural production with grave environmental consequences. There are



reported cases of conflict between conservationists and encroachers on access and control rights to the resources.

Consequently, the loss of valuable indigenous trees, vegetable, crops, fruit and even livestock species has been experienced among the local communities. The threats to unique biodiversity are getting pronounced everywhere in the lake basin. Most community members feel apprehensive about the environmental and ecological situation.

A number of upstream areas particularly the highlands that are the water catchments areas have been degraded by deforestation and agricultural activities. The result is that water springs have disappeared.

The rampant environmental degradation through deforestation, soil erosion, destruction of ground cover by gullies has led to the decline of soil fertility and badlands in extreme cases. When it rains the water sources are not well protected and it drains downstream with devastating effects as observed in eroded areas of Katuk-Odeyo in Nyakach, Nyando District.

The situation in Gwasi Hills, may be attributed to over grazing, clearing land for agriculture, sand harvesting downstream and along the rivers together with rock and murram mining, overstocking or uncontrolled number of livestock in the community, and cutting down of trees for wood fuel and construction, disproportionate harvesting of herbs from trees and cultivation in sloppy areas. The result is massive soil loss and greater siltation of the lake subsequently affecting its ecosystem.

On the lower lying areas, the farmers who have encroached into these areas looking for farmland have interfered with the natural wetland vegetation and its ecosystem.

Additionally, poor drainage, terrain erosion, siltation of streams and unprotected river banks contribute to perennial flooding in the plains of Nyando, Nyatike and Budalangi, among others. Flooding is a major setback that caused havoc to livestock, farms and led to disease outbreak. There is limited effort to harness and control flooding for productive purposes, hence increased losses in agriculture and settlements. Some areas in the lowlands have become permanently swampy.

The poor management of floods has many environmental implications that include an increased in the occurrence of weeds such as *Striga*, crop and livestock diseases and pests, a lot of which are becoming resistant to drugs and herbs. The cassava mosaic virus has also become prevalent and the big grain borer has re-emerged in the region causing huge post harvest losses. The pest and disease control methods are insufficient to cope with the changing environment and ecological conditions.

The communities noted there are weak monitoring and law enforcement mechanisms for dealing with those polluting the water, land or air. There are no clear guidelines on discharge standards from industries and farms up stream. Many culprits go unnoticed and when they are apprehended the penalties are not severe enough.

A low adoption rate of environmental conservation measures by the local communities is evident. The framework for a unified approach in managing local resources is inadequate especially between upstream, and downstream community. Some attempts have been made at tree planting, use of gabions or even check dams but it has not been successful in the control of gully erosion.

### **Socio-economic and demographic issues**

were intertwined with nature conservation. Chastity for all persons was held in very high esteem and respect amongst age groups in society observed. The traditional gender roles were clearly defined by the society and strictly followed. Most communities lived in harmony with their environment and tapped resources with a lot of care. However, current trends have shown a gradual change in these traditional values and norms related to conservation. These have slowly been replaced by western lifestyle leading to erosion of local cultures and little respect for the unique values of the local ecosystem.

The society is no longer governed by the same guidelines since traditional structures have been weakened in the colonial and post-colonial period<sup>12</sup>. People have adopted destructive tendencies towards the environment for example practice of “slash and burn” for land preparation. The push for economic gain over conservation interests has placed a lot of strain on environmental resources.

Consequently, there has been a steady decline in socio-cultural activities related to environmental conservation. Sports and social events were used as “outlets” for extra energy in the traditional society. There was adequate time to engage in such activities and people led more active lives. Currently, the areas and space for sports and recreation in rural and urban areas has been converted to other uses and this has impacted negatively on these practices. Further, indigenous items derived locally from the environment are not respected. The natural resource bases such as seeds, tree species, cultural sites and monuments are not preserved for posterity since the meaning attached to them has diminished.

The elaborate processes that were socially oriented for transferring indigenous knowledge have been significantly weakened by modern lifestyles and the current education curriculum. The focus today has shifted to a modern conventional one, which pays very little attention to the content and core needs of local society as well as development of deeper knowledge about the critical uses and values of the natural resources that support life in the lake region. A lot of knowledge has been lost when the traditional custodians are not able to educate the youth effectively on cultural values attached to the environment and ecology. There is an inter-generational and intra-generational knowledge gap as a result.

The local resource based industries are limited in the Region. Although there are elements of leather works, agro-based processing at village level, fishing and mining

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<sup>12</sup> There was a deliberate move by the colonialists to weaken the traditional governance structures in order to dominate the populations and gain control over their natural resources. The post-colonial government followed suit and adopted the colonial approach of governance.

industries, they are not fully developed and exposed. The cottage industries technology has not been fully developed to match the levels of production from the region. This has resulted in massive loss of produce during the peak season due to absence of preservation methods. The relative impact of the local industries and economic activities on the environment might be problematic if left unchecked especially in the brick making industry that destroys both land and vegetation.

### **Forestry Sector**

Forests are rich in biological diversity. They constitute complex ecosystems that provide valuable services such as water, air purification, stabilization of climate, soil protection, and have cultural or spiritual meaning for individuals, communities, and society.

The local communities noted with nostalgia of a past scenario when, "there were plenty of wild animals and children could spend hours in the forest feasting on the wild fruits", - community member in Trans Nzoia. This was then, maybe 30-40 years ago. Some communities in the catchments remember how they used to be woken up with the beautiful sounds of singing birds and a gentle whispering breeze from the hilltops occupied by large tracts of forested land, a situation that is no longer widespread.

The wanton destruction of forests trees and vegetation through indiscriminate felling to serve economic as well as social needs, have deprived the birds and wild animals of their natural habitat. The general impact of the loss of animal habitat and plant biodiversity is evident in the total migration of birds and wild animals, which would have otherwise provided great potential for both local and international tourism. In some instances whole families of animals and birds have migrated to find new habitats elsewhere.

For instance in the Mau forests of Kericho, the communities reported an out migration of Bongos due to the invasion of the forest by saw millers and more recently human settlement encroachment. The destruction of forests, indigenous vegetation, woodlots and wetlands is a major concern that continues to occur in the Lake Victoria region.

According to a Rachuonyo resident "humans here declared war against the non-talking partners. With such a disturbed ecosystem, she maintained, "human life is threatened in this region".

A number of valued indigenous species of trees and natural vegetation are becoming threatened or extinct, as indiscriminate felling affects their ecosystem. Some communities valued these trees and vegetation for the rare insect, bird and animal life they supported, coupled with their aesthetic beauty and medicinal value. Many species of butterflies, birds, ants and crawling animals, which previously existed, have been almost wiped out, leaving only scarce highly dominant species that have adapted to the changes in the habitat.

The Lake Basin communities attached great cultural value to specific indigenous trees. Indeed some of the larger trees were used as holy ground and shrines where thanksgiving prayers for bountiful harvests or other positive events occurrences as well as during hard times. The introduction of high value exotic tree species such as eucalyptus along riverbanks or natural water sources contributed to significant change in the ecosystem's vegetation and water table. Their high water consumption increased competition with other species and altered habitat.

The communities noted that the encroachment of wetlands has led to a decline of fish quantities as their breeding grounds have been destroyed contributing to the escalating poverty levels in the Lake Basin. A number of shoreline vegetation species such as papyrus and typhus that serve as raw materials for making household furniture, baskets and other handicrafts have not been spared. This trend threatens to deplete all the wetland resources in the gulf, particularly if other destructive tendencies like pollution are not checked. In addition to the wetland's function of providing a natural habitat and breeding ground for fish and other animals, the locals currently view them as fresh agricultural grounds. Wetlands in the upper catchments areas have also been interfered with to some extent

In parts of the lake basin, there has been excessive and indiscriminate harvesting of forests and destruction of catchments areas that have also had their toll on the basic infrastructure of the region. The impacts include washed away bridges and scarcity of firewood as a source of energy. This tendency is on the increase and a formula to address it is yet to be established. Consequences of the forest destruction on the higher slopes included the increased flooding of the lower lying districts, with communities in Nyando observing that the effective depth of river Nyando had been reduced by excessive siltation and its water quality adversely affected.

Forests and forest resources are a key component of environment and ecology. They are the basis of biological, physical and chemical processes required to support life. The conservation of forests is therefore crucial to other sectors in order to maintain environmental and ecological stability. The challenge therefore lies in ensuring that the recommended forest cover of about 10 % is sustained for the efficient ecosystem functions.

### **Conclusions**

The ecology and environment of the Lake Basin has been significantly altered by increased demand from activities required for survival of its population and to foster economic development. An equilibrium should be created to ensure that economical pursuits are compatible with environmental conservation approaches.

## **Theme IV: Governance, Policy and Institutions**

The management and control of natural resources, environment and improving the quality of life and other public affairs has always been in the custody of the central government since independence (in 1963). The principle, system, structures and style of managing natural resources were inherited from the (British) colonial government. The colonial government's aim was to dispossess the people of, control and exploit the resources on behalf of and for the benefit of Britain. Implementation and enforcement was done through the government structures in which the Provincial Administration was the key institution for implementation, and, with the police force, constituted the instruments of coercing people into accepting colonial government's ownership and control. Thus it was inculcated in peoples' minds that the government owned certain forests, the waters in the lakes/rivers/ponds and the natural resource contents, minerals, wildlife, etc.

At independence, the African government inherited the colonial structures, policies and styles of management of public affairs. Thus the legacy continued and remained powerful up to the present day. The government continued to formulate policies and enact laws from the head offices in Nairobi and handed them down for implementation and enforcement through the Provincial Administration.

The government inherited and has continued to use the top-bottom approach in governance. This approach disempowers the local people and undermines a sense of ownership of resources, systems, policies and structures.

Therefore it was not surprising that the people of the basin displayed a mind-set that the government is responsible for the challenges and suggested intervention strategies that are to be adopted by the government. It was not clear to the people that they had a bigger role to play than the government in the stewardship of the natural resources, ecology and environment and in rational exploitation of the available resources and opportunities to eradicate poverty and improve the quality of their life.

Several institutions are engaged in resource management or/and exploitation of Lake Victoria basin and its catchments. These institutions can be grouped into three broad sectors: Government, private sector and civil society. Most of these institutions often pursue their respective sector-specific priorities and approaches. It was observed by the local people that gaps exist in the areas of all-encompassing and harmonizing framework and policies to provide a guide for other sector-specific policies and legislation. Other expressed concerns were that there was laxity in administration (especially with regard to enforcement of existing laws), institutionalisation of community participation.

Some key informants observed that poor governance, manifested in top-down approach, weak institutions, lack of harmonization of sector-specific policies and legislation and corruption over the last two decades have led to over-exploitation, wanton destruction, and other forms of unsustainable utilization of resources in the lake

basin. This situation has been compounded by the state of disrepair of the physical infrastructure that should support the exploitation.

For analytical presentation of information on people's concerns regarding governance, policies and institutions, certain sectors have been selected for highlights and illustrations.

### **Water resources**

Poor governance, in particular, conservation and management, of water resources was seen by most people in the 11 Districts as manifested in laxity in either formulating appropriate policies or implementing/enforcing policies, Acts, standards or failure to provide services in the following areas:

- The Water Act 2002, which came into force in March 2003.
- Standard quality of water supplied through several schemes.
- Maintenance of water supply and sanitation systems/schemes.
- Disposal of raw sewage into the lake.
- Rain water harvesting, protection of springs and exploitation of groundwater.
- Conflict in water use, e.g. diversion of water by horticultural farmers thereby reducing the supply to domestic consumers.

### **Fisheries Sector**

Harmonization of fishing and fisheries among the three East African states, enforcement of the policies and legislation were the key areas focused on by the community. The perennial conflict over fishing boundaries in Lake Victoria between Kenya, Uganda and Tanzania an area of concern as Kenyan fishermen continued to be arrested by the Tanzanian and Ugandan authorities. The main cause of border conflicts is that there are no clear boundary demarcations in the lake. Besides this, the participants at workshops and key informant interviews observed that fisheries policies were not in harmony among the three states. For example, closed fishing seasons for *omena* are not applied uniformly across the region.

Land adjudication ignored the 100m-reserve rule to preserve the waterfronts of beach land away from waterfront leading to the current situation of human settlement/activities on beach land.

Policing of the lake has not been effective. Cases of armed piracy on the lake were reported to be common. Theft of nets and other fishing equipment were frequent.

The fish breeding areas were not identified and gazetted to be co-managed with the people.



### ***Mining Sector***

The participating communities observed that either appropriate laws are not there or the existing ones are not properly enforced to ensure protection of the environment, regulate marketing/pricing and to ensure that local people are not exploited.

### ***Wildlife and tourism***

The institutions that are charged with the management of tourism industry are detached from the community, with little or no benefit realized at the grassroots level. Often, these institutions have not been responsive to local cultural values when exploiting historical sites, shrines and other attractions. Most communities complained that there seemed to be no employment policies to ensure that the jobs of guarding the sites/shrines and guiding tourists into them are given to the local people, who have superior knowledge and interest in them.

There were no clear policies for development of the western tourist circuit. It was observed that recent attempts to strengthen the western circuit by the Kenya Tourism Board had not met with much success, as the locals were not involved in any way.

Laws and policies governing urban development have placed very little emphasis on nature reserves and conservation of natural habitats. Even where such provisions have been made, illegal land allocations and unplanned settlement have been allowed to interfere with the original intentions. Communities further observed that the policies governing conservation and protection of nature reserves and tourism sites were insufficient and did not recognize the current development trends.

High travel costs and taxation regimes for tourists was noted as another deterrent to the growth of tourism in the region. Communities also observed that the government had neglected navigation in the lake and no navigation controls or safety measures were in place. This might have discouraged tourism in the lake.

### ***Agriculture and Livestock***

The Lake Basin is one of the areas where poor governance on the part of the government for the last two decades has impacted negatively on the agricultural sector. Examples of sub-sectors are many that provide testimony to poor governance: dairy, grain, coffee, sugar, etc. Farmers began to lose faith in the institutions that provided grain seeds as they noticed that what they were beginning to get were counterfeit seeds. The same applied to other farm inputs.

### ***Sports and culture***

Whereas sports holds great potential for talent development and employment opportunities, it was observed that the government did not seem to have any policies and programmes for development in this direction. Equally noted was the neglect of culture on its role in eco-tourism.

### **Physical Infrastructure**

The dilapidated state of roads in the basin is deplorable. Some roads are apparently on government records as tarmacked and yet they are not. Government has been collecting revenue for the last two decades but failed to develop and maintain physical infrastructure. This has been one of the most visible examples of bad governance even to casual observers. The poor state of roads has grossly affected the development process of lake basin – from virtually the access to markets with fish and farm produce, the opening up of the western tourist circuit, to rapid wearing out of motor vehicles.

### **Energy**

The local people attributed to bad governance the scanty supply of electricity to one of the regions with the greatest potential for development that would contribute to the growth of national economy. Lack of electricity supply in virtually all the fish landing beaches shows that there has not been a systematic and planned development effort on the part of the government to facilitate development of the fishing sector to benefit the local people.

Failure of the government to systematically target the region with its rural electrification programme and to tap wind-sourced and other sources of energy has slowed the pace of economic development in the region.

### **Forestry Sector**

The sorry state of the forests and forest resources currently witnessed in the lake region has been largely attributed to the poor governance situation that has prevailed in Kenya for the last two decades. Forests have transformed from the largely revered and protected natural resource to one that is purely seen as a commercial commodity, with inelastic potential for exploitation.

Communities around the lake Victoria region attribute the unsustainable exploitation of forest resources to the failure by the government to enforce the necessary laws that have been put in place to protect the very resource. It was, for instance, cited that the ministry in charge of forests has in its mandate the opportunity to gazette forestland as a way of protecting this vital natural resource. Alongside this provision are several legislative prescriptions prohibiting unsustainable forestry practices such as indiscriminate logging, charcoal burning, and excision of forestland for human settlement. But these have not been enforced.

Failure to manage the forest resources has been linked to political interference, rampant corruption, and inadequate punitive measures. The communities particularly cited the fact that the prevailing penalties for offences relating to illegal logging or charcoal burning were too low to discourage offenders. The individuals who are in large-scale exploitation of the forest resources were politically connected, making it difficult for the local forestry officials to control their activities. Some of the forest officials collude with provincial administration to engage in illegal forest activities. It was also noted that the policing of the forests was inadequate especially during the night, leaving it vulnerable to unscrupulous traders who felled trees during the night.

Forests have increasingly provided ideal settlement location for the elite of the society who enjoy political protection, encouraging the practice of forest excision for residential as well as commercial use. The communities blamed this practice on the obliteration of traditional forms of self-governance, which were community centred.

Though recent attempts have been made towards harmonizing and reviewing legislation to protect the environment, the continued unsustainable exploitation of the forest resources would continue to deprive the lake basin community of the benefits of the forestry resource. Consequences identified by the community such as unreliable rainfall patterns, prolonged drought, flooding and loss of soil fertility shall prevail unless the trend is urgently reversed.

### **Education**

The communities in the Lake Victoria basin have depended on education as one major area for investment for themselves and their children since the pre-independence era. Education has provided an avenue for long-term investment through which families uplifted their conditions of living. The changes that have been introduced in the education system; the rise of cost of education to nearly prohibitive levels, the proliferation of the high-charging private schools, the low morale of teachers owing to poor remuneration, and other factors, have prevented most families, as it were, to follow their old familiar path to emancipation from poverty.

According to the local communities, the government, if it was adhering to good governance, should have surveyed to find out whether the poor are accessing quality education.

The people also noted that public (government) schools were grossly mismanaged. For many decades, schools were not subjected to public auditing with the result that parents were asked to pay fees at levels that were beyond the actual budgets of the schools.

Poor administrative and financial supervision of schools and corruption have contributed to mismanagement of funds, undermining of quality education and equity in access to education.

In the observation of the communities, adult education sub-sector appeared to have been neglected by the government. Key informants said that there was need for intensive adult education to address illiteracy and local human skills development.

It was also noted that informal education structures had been dismantled in favour of modern conventional methods. According to them, the value of informal systems should have been investigated, documented and harmonized with the formal system of education.

## **Theme V: Gender and Development**

Gender issues and concerns on areas ranging from gender sensitivity, equity/equality, gender-based violence, to gender-based discrimination (especially all forms of discrimination against women) – constitute one of the most important development challenges facing the Lake Victoria basin. Socio-economic commentators contend that gender-based social challenges have contributed to retardation of economic progress in such predominantly traditional cultural settings as the Lake Victoria basin.

The lives of the ethnic groups that inhabit the Lake Victoria basin are still rooted in their traditional cultures. Patriarchy still dominates in access and control of means and factors of production, decision-making and leadership. Socialization has perpetuated social and power relationships that put the male gender in superior pedestal over the female gender.

Traditional gender roles, dos and don'ts, have been prescribed by the traditional cultures and ingrained in people's minds through socialization. This prescription has however not been in step with the changes within and in the external socio-economic environment that transform human relations. For instance, the emergence of modern money economy to replace the traditional economic systems has influenced, nay, imposed changes in the social and power relations both between couples and in the larger community.

Power can no longer be possessed by the male gender merely for his being male; the cultural prescription of tacit patriarchy can no longer protect him, his power has to stem not only from cultural predetermination and societal dictates but also from economic provisions and relationships - ability to accumulate and maintain wealth of monetary value. In this changed socio-economic environment, the person of the female gender, as an entity, earns her share of place and time to participate in decision-making and leadership at both the household and in the larger society from her economic significance.

The obtaining social, economic, political and cultural dispensations are, as expected, tilted, by societal design, in favour of the male gender. The gender-segregated analysis of daily activity reveals that women are by far overworked. It further reveals that women are mainly involved more on reproductive roles (house chores related work activities geared towards production for immediate consumption), which men and the boy-child do not share in. Being bogged down by this category of work, women hardly get space and time to engage in productive roles (activities that produce wealth of monetary value) and community managing or societal roles (leadership in or participation in activities that are of societal common good).

Community social workers and other key informants assert that violence against women, including those of actual physical harm, intimidation, sexual abuse, psychological torture, rape, etc. are rampant in the basin. It has been observed that violence against women and other forms of discrimination tend to undermine the female

gender's attempt to realize her full potential and contribute effectively towards economic development and general societal progress.

Lake Victoria basin is one of the regions of the developing world in which there is very conspicuous manifestation of women's take-up of roles that were initially ascribed to the male gender in the traditional culture. Participants at workshops observed with regret that most men were no longer performing their role of being true heads of their families – playing a lead role in providing the food and materials needs, and charting the cause of economic development of the family. Many women have risen from merely being housewives to play the role of heading the family in terms of ensuring the material well-being of the family, and, even in cases where there is a husband, providing leadership in the community. The disparity is that they do all these in addition to their traditional roles, thus taking more roles than men.

It appears that men had been orientated to wage employment in urban areas to the extent that when such opportunities dwindle, they found themselves despondent and unable to adjust to the new life.

The youth, especially the male ones, due to poor work culture and rising unemployment situation, are no longer the "gems" of society.

"Said the observer, "All the existing talents, strength and creativity are untapped and misdirected. The whole question lies with role modelling and nurturing by the older men on gender orientation in the families.

Specific areas of human activity, socio-economic sub-sectors provide various perspectives of examining gender issues, concerns and imbalances as hereunder.

### **Water and Energy Sector**

The biggest preoccupation of many a rural woman in the region is not anything of socio-economic value. The life of a typical woman in this basin mainly revolves around fetching water and searching for and hewing firewood.

Supply of safe piped water is rare in the basin. The percentage of the basin's population with access to safe water for domestic use closer to their houses is very minimal. In most areas, one has to travel long distances to fetch water, carrying it in pots, or other containers on the head. Since it is women and the girl-child that fetch water, in accordance with the prevailing traditional gender roles, the female gender is most affected by lack of piped water supply. Therefore virtual lack of supply of safe water is the first indicator of a socio-economic environment that disempowers women.

Women have to fetch water for cooking and washing, for use by almost all male members of the household to bathe and for other purposes. It is noted that this is a laborious and time-consuming task that reduces women to "beast of burden" and robs them of time and opportunity to engage in productive roles. In places where water has to be purchased, it is the woman who has to buy it with her meagre resources.

The fact that wood fuel is the main source of domestic energy in the basin and that it has become so scarce is a major concern in terms of the heavy burden and workload on women. Firewood collection is a major threat to women's quality of life in the basin. She is the main collector, walking long distances, taking a long time to find it, running the risk of injuries in the bush and sometimes being sexual abused and ending up not finding enough. At this rate, "we the rural women will not find time or the energy to do anything else because we have also to do a lot to find and prepare food for the family", remarked a woman Rachuonyo District.

### **Fisheries Sector**

Surveys reveal that only a small number of women are involved in fish resource management. Being a very important, and, in certain areas close to the beaches, the most reliable natural good, the dispossession of women of a share in the management of the fishing micro-economy deprives women of access to economic lifeline. *Only men do the* actual fishing using boats and fishing gear in the lake, a reflection of the tradition the world over. However minor roles of the female gender in other areas of this major local micro-economy - such as ownership of the boats and fishing gear, regulation of the business, etc. - puts women in the periphery of the basin's economic arena.

### **Human Resources Development and Employment**

The development of human resources, from enrolment for basic education in school to training, is still tilted in favour the male gender. Most families would rather put the boy-child in school where there is a reason to chose. Even the traditional training for leadership and other important responsibilities in society target the boy-child.

Orphaned and other vulnerable girls of school age are likely drop off get married or be involved in some form of child labour, or a high-risk life, including prostitution. In some communities in the basin, some girls are married off. All these scenarios are prevalent in communities where formal education for girls is not valued.

In employment, there is still a preference for the male gender in some sectors. In most of the workplaces, there is a glaring presence of more men than women.

### **Agriculture**

The dispossession of women on land ownership has negatively affected crop and livestock production. The traditional land inheritance systems are patriarchal. Women only work on the land but cannot buy or sell the land. Women, however, still remain the principal food producers, farm workers but lack access to and control of means of this critical means of production. The cultural practices deny women the power of decision-making and control over the agricultural resources.

Polygamy and other traditional cultural practices in most communities disturb balance between women's and men's roles and workloads in the agricultural activities. In some cases it leads to competition and at other times negative attitude towards agriculture. Either way, it leaves the women at a disadvantage. For instance, some local cultures dictate that a woman who occupies a lower rank in the pecking order in a polygamous family set up must wait for her senior to plant before she can sow her seeds.



The complexity of the situation against the women is at times compounded by the absence of the husband, for instance when he is on a temporary migration to urban centres to look for work. These cultural inhibitions on women perhaps partly explain the steady decline of food yields and general lack on uptake of new agricultural technology/practices.

Equally noted was the fact that most agricultural tools and other technologies were not women-friendly. Despite being principal food producers, women's interests have not been taken into account in technology transfer. Some participants cited certain farm tools and machinery such as oxen-plough, tractor, and processors that are not women-friendly due to poor designs and policies.

### ***Physical Infrastructure***

The poor infrastructure that is founding the region affects the woman most, especially when she access markets with her merchandise, get water closer to her house, or cannot access health care service delivery points easily. In cases of emergency, for example during pregnancy, poor or absence of roads, lack of telephone lines, and far distance from service delivery points reduce the safety of motherhood. In this situation of extremely poor infrastructure, it is any wonder that the region has some of the highest maternal and child mortality rates in the country.

### ***Reproductive Health***

The Lake Victoria basin is one of the areas with the poorest women's reproductive health. The region has one of the highest maternal mortality and indicators that safe motherhood is still at its lowest. Among the major causes of this situation are suppressive culture on women, poor health seeking behaviour, and poverty. The demographic and health surveys show that uptake of family planning methods is at its lowest here.

Scientific studies indicate that women are more susceptible to HIV infection than men due to their anatomy and economic vulnerability. Poverty puts women and young girls in a tempting situation to exchange money for sex. This practice is more prevalent at the beaches. Fishermen at the beaches take advantage of the economically vulnerable women and manipulate them for sexual favours and also to marry more wives. Statistics indicate higher incidence and prevalence of HIV/AIDS cases at the beaches than elsewhere.

HIV/AIDS pandemic has impacted negatively on the lives of women and children in the lake basin. Widows and orphans face problems of poor shelter, clothing, school fees and inadequate food. The basin has the highest number of widows and orphans per unit population than any other single region in world.

Therefore whereas the women of the lake basin are seen to be working hard on menial work, their economic productivity, contribution to the regions economic growth and rational utilization of the natural resource base are compromised by their cultural subjugation, gender disparity in roles, gender discrimination, poverty and the general underdevelopment of the region.

## **Theme VI: HIV/AIDS**

The Human Immune-deficiency Virus (HIV) and the medical condition it creates in human body - Human Immuno-Deficiency Syndrome (AIDS) – constitute the most devastating and catastrophic challenge in the Lake Victoria basin today. Between 1980s and the second half of 1990s the basin was considered as the epicentre of the HIV/AIDS pandemic in Kenya, if not East Africa. Even though the incidence of HIV infection in several parts of the country is now equal, or even threaten to exceed the basin, this region continues to experience high prevalence and magnitude of impact.

All the participants at workshops, Focus Group Discussions and Key Informants unanimously acknowledged and reported the HIV/AIDS problem as top of their priority, even above poverty, among the contemporary challenges to their livelihood, socio-economic development and the future of their communities.

According to the 2001 results of sentinel surveillance by the Ministry of Health,<sup>1</sup> the region reported some of the highest incidence figures. In terms of percentage of pregnant women testing HIV-positive at surveillance sites, Kisumu recorded 35 %, Busia 22%, Chulaimbo (near Kisumu) 31% and Mbale/Vihiga 25%. Therefore, apart from Meru and Thika (both in central part of Kenya), which also recorded 35% and 21% respectively, the lake basin still had some of the highest numbers of cases. Nyanza Province, in the basin, had the highest cumulative figure at 480,000 of HIV-positive adults between the ages of 15 and 49 years old, compared to the closest figures of 390,000 in Rift Valley and Eastern Province 380,000.

Heterosexual intercourse was reported to be the major mode of infection in the basin, a reflection of the situation all over developing countries. There are also cases of mother-to-child transmission, which takes place during pregnancy and at the time of delivery of the baby. Scientific studies indicate that women are more susceptible to HIV infection than men due to their anatomy and economic vulnerability. Poverty puts women and young girls in a tempting situation to exchange money for sex. This practice is more prevalent at the beaches.

According to surveys on high-risk lifestyle and vulnerability in relation to HIV infection, the fish-landing beaches present the worst-case scenarios. Sudden and unplanned-for glut of cash from fish business in the hands of men and women tempts them to indulge in high risk sexual behaviour. The social stigma attached to AIDS pushes large numbers of "AIDS-widows" to the safe havens in the beaches, where no one knows their background. It is said that unsuspecting men with cash lure and intimidate them to submit to their sexual demands in exchange for cash or other favours. These, coupled with promiscuity, are some of the known causes of high incidence of HIV infection at the beaches in the basin.

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<sup>1</sup> Ministry of Health (Kenya), AIDS In Kenya, 2001 Edition.

By implication, therefore, Districts that have beaches with high fishing activities are likely to be worst hit. To confirm this postulation, Suba District in the southern parts of the basin was reported to be leading in the prevalence of HIV/AIDS in August 8, 2003.

The region has, in the last decade, had spiralling numbers of AIDS-related deaths. "We have now changed our business plans and work schedules to set aside weekends for attending funerals only", Said one secondary teacher at a workshop in Bondo District.

Some casual observers have attributed the high incidence of HIV infection in the region to certain cultural practices, one of which has been branded "widow inheritance" by the media. It is indubitable that certain cultural practices and beliefs tend to intimidate even the "AIDS-widows" to seek sex-linked ritualistic cleansing and remarriage. Many cases were cited in which the kinfolk of a man who died of an AIDS-related illness stubbornly insisted that their sister-in-law must be remarried to one of them even though the cause of death appeared to be AIDS.

Apart from causes associated with culture, which is sometimes overemphasized, condom use in the region, as is the case in many parts of Kenya, is very low. Promiscuity and multi-partner practice, especially among the youth high, is known to be prevalent. Equally important is the fact that, due to the dynamics of HIV/AIDS (including the window and incubation periods), most of the HIV-positive individuals may not know their sero-status until the full-blown stages of AIDS.

Most people in the region do not have access to voluntary counselling and testing service. Even so, there is no incentive to seek VCT services as the larger majority of people in the basin still do not have access to anti-retroviral medicine. Besides, social stigma associated with AIDS is still acting as almost a demotivating factor against seeking to know own sero-status.

The lake region today experiences the worst impact of HIV/AIDS so far. The economic impact of AIDS has been phenomenal in the basin, for a region that is known for its investment in education as its economic mainstay. According to studies, the largest number of AIDS victims has been between the age groups of 15 to 49. This age bracket contains the most energetic, productive, resourceful, salaried workers, and educated young people in their prime age – in whom their families and community have invested.

Participants in this process reported the presence of large populations of orphans and widows. Commentators assert that the basin has higher number of widows and orphans per unit population than any other single region in world. Thus the HIV/AIDS pandemic has brought about a situation whereby there are more dependants than providers. With the death in many families of young men and women whom they had relied on, all economic and social problems set in. Sites of are abound of households or home in which a child is in charge of finding the daily subsistence food for the siblings. A lot more children are on the streets, while the number children out of school increases although the situation was eased by the free-education policy by the new government.

Activities on food production and other economic activity areas have suffered due to high morbidity and mortality associated with AIDS. Partly resulting for this situation, food insecurity, which was earlier minimal, has surfaced prominently lately. HIV/AIDS has exacerbated the poverty situation and set back the socio-economic gains made in the years before the late 1980s. The pandemic not only has negative impact on population development, it tears into the social fabric and undermines the beautiful age-old socio-cultural bedrocks such as the extended family system; it causes social and moral breakdown, gives rise to high incidence of crime and breeds insecurity; it threatens the quest to uphold societal values, norms and mores.

## **C**hapter 4: **Visions, Strategies and Indicators**

### **Introduction**

From consultations, it was quite clear that riparian communities would like to experience a positive transformation in exploitation and management of natural resources, and positive socio-economic changes in their lives. The communities desired and longed for sustained positive and meaningful change both for the region and in their personal lives. However, the communities were faced with serious challenges and threats enunciated in broad areas that include poverty, unsustainable utilisation of the resource base, weak value systems, and poor governance.

In an attempt to highlight appropriate strategies that would enable the community realise their desired visions under each thematic area, they proposed an Implementation Matrix that appears on pages here below and provides details on the issues, visions, strategies and indicators.

In view of the obtaining socio economic, ecological and environmental status of the region; aware that the existing opportunities need to be exploited to reduce the threats and challenges to natural resource development and management; conscious of the need to put more effort in improving the situation for their own sake and for the sake of generations to come; and aware that it is their responsibility to adapt to the socio-economic changes in the external environment; the community proposes the following shared vision:

*“A Lake Basin Community enjoying a sustained natural resource base within a well-conserved environment providing foundation for economic vibrancy that improves their livelihood and increasing opportunity for full realisation of their potential”.*

The vision incorporates components of a society with a deep-rooted sense of community, guided by social values and norms that recognise the important role of environment to their overall development.

The matrix in the following pages provides a logical framework that, for each specific challenge, identifies the situation, proposes the vision and the strategy, and provides an outcome indicator.

## PROPOSED IMPLEMENTATION MATRIX

### SOCIO-ECONOMICS AND DEMOGRAPHY

CHALLENGES	VISION	STRATEGY	INDICATORS
Poor and socio-economically vulnerable people.	A people empowered economically, socially, and politically with high capacity to chart their own destiny	<ul style="list-style-type: none"> <li>Promote dignity of work and build the capacity of people to identify and tap economic opportunities.</li> <li>Increase economic opportunities through increasing access to physical infrastructure and financial services</li> </ul>	Increased household income and access to important services.
Gender inequality - Discrimination and violence against women, etc.	Gender equity in reproductive & productive roles, access and control of resources and means of production.	<ul style="list-style-type: none"> <li>Promote gender equity and institutionalise affirmative action for sustainable family and community development.</li> <li>Build the capacity of women through sensitisation and training.</li> <li>Promote dialogue on human rights and gender equity in resource utilization and sharing benefits</li> </ul>	<p>Raised awareness need for gender equality at family and community levels.</p> <p>Gender-balanced representation in leadership and decision making positions.</p> <p>Equitable access and control of available resources and benefits at all levels.</p>
Poor health, sanitation and hygiene	A healthy community	<ul style="list-style-type: none"> <li>Sensitise the community on and design and implement health and hygiene activities.</li> <li>Promote pollution reduction on water resources and management of domestic and industrial waste disposal</li> <li>Design and implement rights-based activities to build the capacity of communities to demand accessible quality health care services.</li> </ul>	<p>Increased awareness and participation in health seeking behaviour and reduction of pollution</p> <p>Cleaner water sources; higher domestic and industrial hygiene</p> <p>Improved access to health care services</p>
High incidence/prevalence and impact of HIV/AIDS.	Community free of HIV/AIDS and associated problems.	<ul style="list-style-type: none"> <li>Design and implement risk reduction activities.</li> <li>Design and implement activities that improve access to anti-retroviral drugs and provide care and support to families and individuals negatively impacted.</li> </ul>	Reduced incidence and impact of HIV/AIDS



<p>White collar-jobs-oriented education system.</p>	<p>Quality education responsive to development needs and accessible to all.</p>	<ul style="list-style-type: none"> <li>• Develop relevant curricula</li> <li>• Institutionalise compulsory free basic education</li> <li>• Reactivate youth polytechnics</li> <li>• Promote and support local industry and marketing</li> </ul>	<p>Improved Curricula Enrolment and completion of all school-age going children. Functioning youth polytechnics. Increase in number of new industries and jobs created.</p>
<p>Control of the local commercial and industrial sectors by non-indigenous people and low investment in trade and industry by the local people.</p>	<p>Vibrant commercial and manufacturing sectors that are controlled by the local people and significantly supports the local economy.</p>	<ul style="list-style-type: none"> <li>• Develop small-scale enterprises and cottage industries.</li> <li>• Create and revive stalled projects and industries emphasizing use of locally available resources.</li> <li>• Intensify rural electrification for industrialization and jobs.</li> <li>• Mobilize local community to engage in business enterprises.</li> <li>• Build capacity and inculcate business culture and saving in the local people.</li> <li>• Give business support infrastructure, e.g. cold storage for fishing industry</li> </ul>	<p>Increased number of enterprises. Increased number of skilled local entrepreneurs and volume of credit accessed. Increased number of functioning new and old industries. Coverage and access to electricity. Increased demand and access to business support systems and IT.</p>
<p>Poor infrastructure</p>	<p>Modern, effective and efficient road, water, and air transport, communication, and rural electrification network for improved marketing and trade.</p>	<ul style="list-style-type: none"> <li>• Build infrastructure for water supply.</li> <li>• Modernize and expand the road and rail network and modernise Kisumu Airport.</li> <li>• Build capacity of community to participate in the development and management of road and communication network, including IT.</li> </ul>	<p>Increased and improved water supply/transport. Increased length of tarmacked road and railways. Increased access and utilization of IT and media.</p>
<p>Retrogressive attitudes and cultural practices that retard socio-economic development.</p>	<p>Celebrated cultural values and practices that promote socio-economic development.</p>	<ul style="list-style-type: none"> <li>• Initiate a process of rediscovering the self, different cultural practices and attitudes.</li> <li>• Challenge and address retrogressive attitudes, e.g. attitude towards work, begging, glorifying poverty.</li> </ul>	<p>Increased progressive cultural practices, and initiative taking.</p>

<p>Unexploited sports and recreation</p>	<p>Vibrant sporting culture.</p>	<ul style="list-style-type: none"> <li>• Promote sports such as ball games and athletics as employment creation.</li> <li>• Build sports facilities.</li> <li>• Promote and popularise indigenous community recreation events and sports.</li> <li>• Provide social amenities.</li> <li>• Promote theatre and music.</li> </ul>	<p>Increased number of people involved in sports as a profession/career.</p> <p>Increased number of annual and seasonal community events.</p> <p>Increased number of sports and recreation centres/amenities.</p> <p>Increased use of theatre and music for development.</p>
<p>Insecurity in the region and on the Lake.</p>	<p>Community where law and order is upheld and the community members feel safe.</p>	<ul style="list-style-type: none"> <li>• Increase the number of police stations closer to the people.</li> <li>• Build capacity of the community to participate in maintenance of law and order e.g. establishing community policing.</li> <li>• Provide security surveillance on the Lake Victoria.</li> </ul>	<p>Increased security and safety, reduced cases of lawlessness.</p>
<p>Poor and lack of inter-territorial policies</p>	<p>Respect and vibrant trade relations within and among riparian states and other beneficiaries of the Lake Victoria waters.</p>	<ul style="list-style-type: none"> <li>• Encourage free utilization of the Lake by members of riparian states by removing fishing barriers.</li> <li>• Regularize security on the lake by riparian state machineries</li> </ul>	<p>Free fishing</p> <p>Joint control and regulation of lake affairs.</p>
<p>Threatened survival of fish and fishing industry</p>	<p>Abundant fish and a vibrant fishing industry</p>	<ul style="list-style-type: none"> <li>• Create awareness on fish production and establish fish ponds.</li> <li>• Establish fish processing and storage industries for benefit of the local community.</li> </ul>	<p>Fisheries developed as a major and sustainable sub-sector for the local economy.</p>

## NATURAL RESOURCES

CHALLENGES	VISION	STRATEGY	INDICATORS
Scarce water supply	Adequate potable water accessible to all for both domestic and industrial use.	<ul style="list-style-type: none"> <li>Protect catchments and wetlands.</li> <li>Preserve flood plains.</li> <li>Design and implement sustainable water supply program.</li> </ul>	A clear majority of residents in the community can access potable water.
Decreasing fish and fish variety/species	Abundant fish in quantity and variety	<ul style="list-style-type: none"> <li>Restock lost species.</li> <li>Control population of Nile Perch.</li> <li>Manage fish habitat.</li> <li>Address unfair competition.</li> </ul>	Increased fish varieties and controlled population of Nile Perch.
Unexploited mineral and crude mining of sands and soils	Sustainable exploitation of mineral, sand and soils base in balance with nature	<ul style="list-style-type: none"> <li>Research mineral potential and availability.</li> <li>Control harvesting of mineral, sands, stones/rocks and soils.</li> </ul>	Improved mining practices Mining/minerals is one of the significant sources of wealth.
Neglected wildlife potential	Developed and sustained wildlife populations	<ul style="list-style-type: none"> <li>Inventorise and protect wildlife by numbers and species diversity</li> </ul>	Secured nature and game reserves.
Diminishing agricultural land and poor livestock breeds	Abundant agricultural output and developed livestock production	<ul style="list-style-type: none"> <li>Promote efficient land use.</li> <li>Promote adoption of agricultural technology.</li> <li>Improve livestock breeds.</li> </ul>	Increased yields Quality of livestock products
Depleted forest cover and loss of biodiversity	Restored, protected, conserved, preserved forests and increased availability of medicinal herbs	<ul style="list-style-type: none"> <li>Afforestation</li> <li>Re-afforestation</li> </ul>	Increased tree and forest cover:
Unexploited energy potential (hydro, geothermal, solar, wind)	Sufficient and affordable energy supply for all in domestic and industrial use	<ul style="list-style-type: none"> <li>Harness all potential energy sources</li> <li>Promote energy efficiency</li> </ul>	Marked increased volume of efficient domestic and industrial energy use. Marked increase in resulting employment

## GOVERNANCE, POLICY AND INSTITUTIONS

CHALLENGES	VISION	STRATEGY	BENCHMARK
Under-utilised and polluted water resources.	Adequate and well-maintained facilities for efficient supply of water for all.	<ul style="list-style-type: none"> <li>• Control flooding.</li> <li>• Develop &amp; institutionalise standards for industrial effluent management.</li> <li>• Construct proper sewage treatment plants and appropriate disposal systems for waste.</li> <li>• Involve community in management of water resources.</li> </ul>	<p>Local people are sensitised and involved in pollution control.</p> <p>Functional irrigation systems.</p> <p>Reduced pollution.</p>
<p>Threats to sustainability of fishing and stocks.</p> <ul style="list-style-type: none"> <li>• Over fishing by persons from outside.</li> <li>• Repatriation of income from fishing business.</li> </ul>	A stable and sound fishing industry for improved livelihoods for locals.	<ul style="list-style-type: none"> <li>• Institute fishing policy framework to protect local fishing community.</li> <li>• Maintain quality infrastructure in basin.</li> <li>• Enforce fishing restrictions (gears/areas, seasons, etc).</li> </ul>	<p>Local fisher-folk participating actively in the regulation and control of the sector.</p> <p>Policies/laws that put local people first and protect local fishing industry.</p>
Unexploited minerals and crude mining of sands and soils.	A researched and efficient mining industry for improved livelihoods.	<ul style="list-style-type: none"> <li>• Establish and enforce law to guide community on mining.</li> </ul>	Local people are sensitised and involved in enforcement of mining regulations.
Endangered and unexploited wildlife potential for tourism and biodiversity.	Harmonious balance between wildlife and community and vibrant local tourism.	<ul style="list-style-type: none"> <li>• Secure nature parks and game reserves.</li> <li>• Formulate policy framework for co-existence of community and wildlife.</li> <li>• Promote tourism in the region.</li> </ul>	<p>Nature parks &amp; game reserves developed/rehabilitated.</p> <p>Local people value and participate in wildlife conservation and enforcement of policies.</p>
Deforestation	Protected forests, tree cover and catchments areas.	<ul style="list-style-type: none"> <li>• Enforce laws that protect environment while providing for rational economic utilization.</li> </ul>	Local people consciously involved in reforestation.
Unexploited energy potential	Sustainable utilization of existing energy sources.	<ul style="list-style-type: none"> <li>• Research on and document all potential sources of energy.</li> <li>• Develop energy infrastructure for local use and for export.</li> </ul>	All potential sources of energy exploited.

Dilapidated road and communication networks.	A basin with adequate tarmac roads.	<ul style="list-style-type: none"> <li>Build new roads, rehabilitate existing ones and maintain road network.</li> <li>Institutionalise IT use.</li> <li>Standardize guidelines for development, maintenance and security measures of communication infrastructure in balance with environment.</li> </ul>	<p>Good state of adequate length of tarmac road network within the region.</p> <p>Local communities participate in maintaining feeder roads.</p>
Poor health, sanitation and hygiene.	Health care situation meet standards.	<ul style="list-style-type: none"> <li>Review and enforce public health laws and policies.</li> <li>Improve healthcare infrastructure.</li> <li>Establish more healthcare facilities and mechanisms with greater community participation.</li> <li>Promote disease prevention and healthy behaviour.</li> </ul>	<p>Local people sensitised and demonstrate good health-seeking behaviour</p> <p>Healthcare facilities providing accessible quality service.</p>
Inadequate Attention to HIV/AIDS by the government and leaders.	HIV/AIDS free society.	<ul style="list-style-type: none"> <li>Promote voluntary counselling and testing and increase VCT centres.</li> <li>Make anti-retroviral drugs accessible to those who cannot afford.</li> <li>Reduce the social stigma on AIDS.</li> <li>Involve leaders in the campaign against AIDS.</li> <li>Allocate enough resources and constantly review plans and approaches on HIV/AIDS.</li> </ul>	<p>People seek testing voluntarily.</p> <p>Majority can access anti-retroviral drugs.</p> <p>Government, leaders and local people are involved in anti-AIDS activities.</p>
Expensive and inappropriate education.	Affordable, quality and relevant education for all responsive to development needs.	<ul style="list-style-type: none"> <li>Compulsory free basic education</li> <li>Review curriculum.</li> <li>Rehabilitate and expand skills training.</li> </ul>	<p>Local people supporting and share the philosophy upon which the curriculum is based.</p> <p>People understand and support of the education policy.</p>
Corruption and misuse of power by leaders and non-indigenous Kenyans.	Good governance	<ul style="list-style-type: none"> <li>Raising local resources on ownership and control of resources.</li> <li>Enforce law on corruption and penalize corrupt leaders.</li> <li>Enforce limits on ownership and investment by non-indigenous people (on land, building, fishing rights).</li> <li>Enforce taxation on investment by all.</li> <li>Control monopoly and exploitation in businesses.</li> </ul>	<p>Local people empowered to protect their rights and interests.</p> <p>Local people have a reasonable share in the control of local resources and businesses.</p>

Weak inter-territorial policies and infrastructure.	Vibrancy and harmony in cross border trade, fishing activities and sharing of resources.	<ul style="list-style-type: none"><li>• Renegotiate Nile Treaties.</li><li>• Formulate and enforce relevant regional policies and laws to address fishing, cross-border trade, etc.</li></ul>	Sharing of water resources is free and equitable. Standard policy guidelines.
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# Chapter 5

## Conclusion and Recommendations

### ***Contextual Discussion of the problem***

The enormity of resources with which the Lake Victoria basin is endowed has been elaborately dwelt in Chapter 3 and elsewhere in this document. It is modest to state that Lake Victoria basin perhaps, of all the geographical regions in Kenya, has some of the most ideal resource bases and potentialities for kick-starting economic development for the benefit of not only the basin, but also for the country as a whole. This is one of the few areas today where investment viability, in terms of input-output ratio, can be optimised in the shortest time possible.

The basin boasts of some of the highest concentration of people with above-basic, middle-level college and university education and training. The additional plentiful low-cost labour, due to high unemployment, provides the lake basin with the best untapped quality human resource in the waiting for now and for the future.

With all the natural resources and friendly and accommodating social systems - fresh water bodies all over, reliable climatic conditions, the gently terrain, the potential and opportunities in fishing, forestry, mining, livestock and crop farming, sports, tourism, and the cultural value systems, to mention but a few – the lake basin presents the greatest potential for development investment at both private and governmental levels. Thus any casual observation and interpretation of the issues would summarize the situation simply as “underdevelopment amid abundance of resources”.

So why is the contradiction conspicuous? A logical trace of underdevelopment in the basin must go into the depth wherein lies a fusion of weakness of the populace, poor leadership, and bad governance. The three factors have had mutual reinforcement of each other over the last few decades.

However, any attempt to single out one of the three factors and magnify it as the main cause constitutes a skewed paradigm that can only open up, at best, a dilemma of contradiction in terms. For instance, there has been a wrong a-posteriori that “if poverty exists in the basin (or some parts of it) amid abundance of resources then the people of the area must just be lazy”. This argument has been advanced at times from the ethnocentric stand-point, at times in an attempt to negate inequitable allocation of development resources, and, also by the rivals of politicians from the basin. The fact that this allegation is sometimes parroted by some snobby individuals of the basin disguises the insulting connotation, for which it is intended, it’s preposterousness and the misconception of the original authors.

Equally reactionary and flippant of its proponents is the (opposite) a-priori that “the regimes that have hitherto been in power schemed and marginalized the basin and that is why the people are poor”. Like the opposite argument, this self-insulating perspective has clouded the minds of the local people so much so that it has left them despondent

and misguided that their expectation for salvation can only come if there are political changes that put their own leaders in power.

Another school of thought wrongly holds that the people of the basin are poor because they are not inherently entrepreneurial; and therefore unable to succeed in any form of entrepreneurship.

The three arguments have colonized all the space for any healthy debate, innovation and struggle. Some have been so seductive that their proponents have inadvertently used them to divert the people's attention from the earlier search for development alternatives to, instead, alternatives to development.

The situational analysis in Chapter 3 highlights certain symptomatic challenges and threats that include the following: water pollution, environmental degradation, reduced agricultural productivity, low-household income, gender inequity (invariably manifested in the more overt areas such as discrimination and violence against women), diminishing access to health care services by the majority, and high incidence and impact of HIV/AIDS. These challenges and threats in thematic contexts are a pointer to broader challenges and constrains on socio-economic progress.

The above challenges and threats seem to string out in a pattern that anchors onto the following four broader challenges:

- “Poverty and socio-economic vulnerability”;
- “Degradation of value systems and fixation in socio-cultural practices and beliefs that hinder socio-economic progress”;
- “Unsustainable and irrational utilization of the natural resource base”; and
- Bad governance - manifested in a top-down system that negates inclusiveness/participation, ineffective enforcement of policies/laws and/or ineffective institutions (where good and appropriate ones exist)”.

The above composite challenges exist in a situation that is exacerbated by gender inequity and virtual disharmony in the inter-relationship between different segments of the population (women, children and men), and, lately, ravaged by the HIV/AIDS.

Our interpretation of the challenges in these broad areas is shaped not so much by the single-angled treatises – important though they are in informing academic debates and stimulation for wider thinking – as by gleaning from the response of the community, our experience on these issues and the situation of the region.

It is our considered perspective that there is a dynamic relationship and a mutual reinforcement between some of the broader challenges and the immediate “problems”. The co-relation produces a vicious cycle in some cases. The level of vulnerability due to

poverty is nearly proportional to the amount of risk of HIV infection. And one of the ultimate impacts of HIV/AIDS is poverty and vulnerability. By the same token, most poor households cannot afford other sources of energy and therefore depend on wood fuel and charcoal, a situation which leads to depletion of forests and degradation of the environment, which, in turn, leads to low-agricultural returns and ultimately contributes to increased poverty.

Based on the foregoing discussion, it can be discerned that the basin's underdevelopment started when three factors emerged, more or less simultaneously. First, there must have been *a weakness on the part of the inhabitants of the basin that hindered their ability to adjust or adapt to the new socio-economic and political order.*

Can the people's weakness alone adequately explain the emergence of the obtaining situation? This argument is only tenable when applied to a stateless society. We must therefore look elsewhere to fill the explanatory gap. If the resources have been there and their utilization is moribund, then it is *bad management of public affairs, weak enforcing institutions or inappropriate laws/policies that let down the basin.*

Thirdly, the importance of leadership cannot be gainsaid. In his book, *The Trouble with Nigeria*, Chinua Achebe emphasizes the role of leaders in development when he says "...the trouble with Nigeria is simply and squarely leadership"<sup>1</sup>. The people's weakness and bad governance should have been mitigated by visionary, responsible and inspiring local leadership - on all parlasses: social, cultural, economic and political. This kind of *real leadership appeared to have been wanting.*

### **The Way Forward**

To put the development wagon on to the rail-road that leads to positive socio-economic change does not necessarily mean going back to old practices. Indeed it is deluding to reminisce on the past period as though it was a utopia. We must agree to embark on some kind of a renaissance of socio-economic development. To do this we must have a fresh definition of the kind of development we want for the basin. We must define this development as a process that reduces people's vulnerability and increases their capacity. In this definition, if equality and equity are the goals of development, then interventions must identify and address the causes of the people's weaknesses and establish their sources of strength; and understand the dynamic relationships between these two.

In this approach, the people must be put at the centre of planning and implementation of interventions. It is our recommendation, out of conviction, that the main approach to development be one that has a long-term investment in the people of the basin. This is *capacity building* of the inhabitants. This would involve strengthening the capacity of the people to enable them to determine their values and priorities, and to take action on these as a basis of development. In this approach, each situation should be addressed specifically while setting broader longer-term goals.

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<sup>1</sup> Chinua Achebe, *The Trouble with Nigeria*, 1994. Henemann, Nairobi.

We are aware that capacity building cannot be done exclusively. It must go simultaneously with activities that are aimed at influencing changes in the social, economic, and political (and governance) environment.

For this capacity building to be at the core of development strategy, it would be imperative to adopt the following guiding principles:<sup>2</sup>

- *People-centredness*: Since the development strategy will be one that aims at improving the lives of the inhabitants, it will have to be seen to affect people's lives in a way that is meaningful to them.
- *Empowerment*: No development will be worth the inputs if it will not make people gain strength, confidence and vision to work towards improving the quality their lives. Women and men get empowered by their own efforts and not what others do to them.
- *Participation*: The development process will have to provide more space for the inhabitants to make decisions on matters that affect their lives. Women and men get disempowered when they are prevented from exercising this right.
- *Gender harmony and interdependence*: Conscientization activities will be necessary for the communities in the basin to become aware of, respect and utilize the inter-relations between women, men, and children for accelerated social and economic progress. They will have to recognize that the needs of these different groups are distinct and vary according to socio-cultural, economic and political circumstances. Development cannot isolate and target one of these groups without impacting one way or the other on the lives of the other two groups.
- *Human rights*: Most critical to capacity building are the less tangible areas of socio-cultural and political sustainability. Therefore human rights promotion is at the core of capacity building. These rights include civil, political, social and cultural rights – at individual and collective; private and public levels - of all women, men and children.
- *Sustainability*: The strategies would have to seek sustainability through promoting equity between, and for, all men and women and to enhance their ability to aspire to and gain continuous improvement of their lives. Other than building their capacity for self-reliance, the strategies must aim to put them on a pedestal where they are ready to adjust, withstand and overcome pressures on their lives.
- *Change*: This development strategy must strongly confront the actors that are reluctant to recognize change and adapt to it. Marcel Proust, the French novelist, once wrote, "The real voyage of discovery consists not in seeking new lands, but in seeing with new eyes."<sup>3</sup> Design and implementation of interventions must be done in the context of social, economic and political changes. The beneficiaries, actors and stakeholders must be made to understand that they have no control over most of these changes in the national and global environment, nor can they always predict them. Understanding and applying new development strategies require a reframing of

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<sup>2</sup> Deborah Eade, *Capacity Building: An Approach to People-Centred Development*, 2000, Oxfam, UK and Ireland

<sup>3</sup> Quoted by William F Christopher and Carl G Thor in *World-Class Quality and Productivity*, 2001, Financial World Publishing, United Kingdom.

traditional thinking.<sup>4</sup> The leaders and the entire community must build capacity to adjust to the changes while not losing certain values and ideals. Issues of conflict between the risk of HIV infection on the one hand, and beliefs and traditional cultural practices on the other can be confronted with this principle.

The above recommendation on capacity building of the people, if adopted, can only produce results if there is simultaneous capacity building in governance. For capacity building of the people is meaningless, and can have negative impact, if not accompanied by good governance.

And therefore we recommend a three-tier capacity building whose second arm embraces governance in three areas: peoples empowerment and participation in a bottoms-up approach in all activities and issues that affect their lives. The second component is review of all laws and policies regarding environment, ecology, and exploitation of natural resources; and involving the inhabitants of the basin in their enforcement.

The third component in the process of building capacity for improved governance is reviewing and redefining the role and authority of the institutions and government departments charged with the responsibility to oversee, regulate and control the utilization of resources. We must then deploy qualified and motivated personnel in the institutions/department and provide them with adequate resources. Lastly, in improving governance, we must set goals to be achieved, targets to be met, peg benchmarks and performance indicators. Ignoring these will be tantamount to blind-folding the actors as they grope for progress in socio-economic development.

The third, and not least in importance, in this three-pronged model is capacity building that targets community leadership. Since independence, the inhabitants of the basin have looked up to the politician and the government to lead in development process. The legacy thrives up to today, which still influences the government to peg allocation of some of the resources to electoral constituencies.

Thus politicians have occupied all the space of leadership and seized even the space for leadership on socio-economic activities – for which he/she may not necessarily have capacity. The politician nonetheless has an important role to play in socio-economic development. So the capacity building for leadership must target them also as a special lot so that they are disabused of their misconception that their leadership role is all-encompassing.

This process of depoliticisation of development in the basin can only reach a conclusive end when the populace is also dissuaded from dependency on the politician for leadership in all spheres. And so leadership must be redefined for the community members to assign roles (tacitly) to the relevant leaders, and everyone sensitized in the new social order.

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<sup>4</sup> William F Christopher and Carl G Thor, 2001. *World-Class Quality and Productivity*, Financial World Publishing, United Kingdom.

The colonization of space by the politician has disempowered the other elite, who has remained reticent on the sideline. The business, educated, farming administrative, and other elites have not significantly participated in providing vision, guidance and inspiration on matters such as environmental conservation, social change, social justice and collective economic initiatives. The elite of the community in the basin – from whichever walk of life – should go through conscientization that redefines for them their role as leadership for development, from each according to talent, ability and opportunity.

This capacity building for leadership should have the goal of shaping up leaders to have a sense of responsibility, a caring-and-serving attitude, and the will to take action in the management for rational exploitation of natural resource, providing a vision on collective economic initiatives, safeguarding collective and individual human rights, and taking lead in adoption of progressive value systems and socio-cultural practices.

Our recommendation on a three-tier capacity building has deliberately avoided a project-based approach to development in the basin. This is because experience shows that short-term measures contained in (short-time-span) projects are but stopgap interventions that are designed to bring about pre-defined outcomes. Meaningful projects that become part of the wider multi-dimensional process are definitely implied and recommended. The proposed visions, strategies and progress indicators/outcomes in the Matrix (in Chapter 4) provide an important base for concrete projects to deal with specific areas. With pragmatic planning, commitment from all stakeholders and political goodwill, the lake region can indeed turn into the breadbasket and haven of good living for all.

Apart from the specific recommendations in the Matrix in Chapter 4, we have, in this chapter recommended a broader three-dimensional capacity building that if well-designed will tackle all challenges earlier enumerated in this chapter, and will also address the weak socio-economic base on which rests the most devastating among the contemporary challenges – the HIV/AIDS pandemic.

This is the capacity building for the development of the basin that will identify the specific constraints that the women and men experience in their attempts to realize their basic rights and to get energized in their ability to overcome the causes of their exclusion and suffering. This multi-faceted capacity building approach will ensure inclusiveness in the process of pursuing a socially just and equitable society where the community lives in harmony with the environment and has the capacity to adjust to forces of change and manage the change.



## **APPENDICES**

## **APPENDIX I**

### **Critical events and adjustments in approach and methodology:**

The vision and strategy project in Kenya started in December 2002 with the Commissioning of the (Kenyan) National Task Force (NTF).

Before this event, the World Bank office in Kenya had hired a national consultant to assist with coordination of the process in the country. Her work began in February 2002, with attending the International Consultant's planning forum in Arusha. There was a team of consultants within the country to assist the international consultants which became known as the Country team.

The team visited the Lake Victoria region to gather information for the inception report. In the process, the following adjustments were made:

**Think Tank:** this was a group of individuals with knowledge and experience on issues of Lake Victoria who were invited by the national consultant to a workshop. This team helped to outline the issues to be covered by the project and the districts to be earmarked for consultations. Some of the individuals in this group later became members of the NTF, others in the team that helped to collect views from the districts, while others continued to participate in various linked forums.

**Inclusion of Strategy and Benchmarks:** the Kenyan stakeholders observed early in the project that it was not enough to develop a vision without strategies for creating change.

**District Facilitation Teams:** comprised individuals resident at the district and community level with knowledge, experience and capacity assists with implementation data collection activities.

**Stakeholders** were individuals and institutions, either benefiting from the resources, or actors in activities related to utilization of the basin's resources, or involved in the regulation and control of resources and activities. The following stakeholders were either involved at different stages of implementation of the vision and strategy development process or were targeted with data collection activities.

#### **The Government of Kenya:**

Policy level: the Chief Economist in the then Ministry of Environment and Natural Resources (Ministry of Water Resources Development after the split into two from beginning 2003), other planners, environmentalists, and engineers, among others.

**District level:** district development officers, district social development officers and officers from the Central Bureau of Statistics.

**Local level:** the provincial administration.

**Civil society:** non-governmental organizations and community based organizations that deal with multi-sectoral development programmes, different interest groups, farmers, fisher folk , miners, people living with HIV/AIDS.

**Private sector:** the private sector was glaringly missing at the policy and district levels. The private sector organizations that had been invited to participate included institutions in the commercial and manufacturing sectors. They include; fish processors, the tea industry, manufacturers of paper products and service providers. However, some of the private sector organizations were reached through the sector.

**Local authorities:** Kisumu City Council and Kericho Municipal Council participated in the process in their capacity as local authorities.

**Project output:**

A report was produced from every consultations forum including the following:

**1. Report of the Think Tank:**

This report outlined the interpretation of the vision development, drew up criteria for district and individual participation, identified districts and institutions to participate.

**2. Report of national stakeholders workshops:**

The report covered the deliberations of this workshop that brought together stakeholders from the 12 identified districts. In a three-day workshop, the stakeholders discussed issues affecting the community. They debated the causes; consequences and what can be done about these issues. As a way forward, each district selected three people to represent the district in an initial consultative group before the National Task Force was constituted by the Government of Kenya.

**3. Kenya Internal Process Report Volume I:**

This report contains the proceedings of the initial activities- before the NTF was constituted.

**4. Kenya Internal Process Report Volume II-**

The report contains proceedings from the stage of the commissioning of the NTF in December 2002.

## **Overall Values and Principles:**

The process was guided by the following values and principles

### **1. Inclusiveness and Participation**

From the project terms of reference, development of vision was intended to be an all-inclusive process. To achieve this, the process initially took a bottoms-up approach and considered all the possible levels of stake holding within the basin.

The first forum in the process was the selection of candidates to serve on the National Task Force. Although the selection was undertaken according to guidelines provided by the East African Community, great care was taken to ensure that there was harmony in the level of consultations.

The aspect of inclusiveness considered a cross-spectrum of levels to address different aspects of the process including: the ability to mobilize and communicate at the community and district levels, to articulate and meaningfully translate policy into the process and the ability to interpret and document the people's information into a live and potentially implementable document.

### **2. Gender Sensitivity and Responsiveness**

The process sought to be sensitive on gender equity in participation. At the district and village levels, the teams ensured that there was gender balance as much as possible in the forums. In most forums, there was a 50% gender balance in participation. Discussions in all forums deliberately debated and recorded existing or emerging gender issues.

### **3. Capacity Building**

The process of vision and strategy development ensured that the participating individuals were first empowered with information and sensitized on issues and situation. This was deliberately done to build the capacity of the target groups to participate at an informed level.

## **APPENDIX II**

### **Members of the Kenya National Task Force:**

1. Joseph Kwaka – Chairman of the NTF
2. Fresia Kamau
3. Jacob Zecha Ruwa
4. George Wasonga
5. Oyugi Aseto
6. Okumu Makogolla
7. Wycliffe Omutsani
8. Charles Juma Mbara
9. Daudi Kitur
10. Agnes Yobterick
11. Kiriimi Guantai
12. Raphael J. Achola Kapiyo
13. Roselyne Kavonga Lwenya
14. Kiproop Kimuge
15. George J. Anyango – Focal Point Person from the Government

### **National Consultant:**

Gertrude Kapiyo

**Members of the District Teams:**

1. Joseph M. Wambua
2. William Lituyi Etwasi
3. George King Musoga
4. Ronald Onyango
5. Norbert Odhiambo Akuom
6. Juma Alex Emojong'o
7. Jacob Onyango Atiang'
8. Alfred Okinda Ogwande
9. Grace Woigo
10. G.O. Ogwang
11. Caleb Ochieng' Miya
12. Grace A. Odhiambo
13. Gladys Kinyuah
14. Charles Maina Wafula
15. Samwel Kipchumba Koskey
16. Michael Oruru
17. Maurice Odhiwa
18. Phoebe Atieno Nyagudi
19. Mark Omondi
20. Abok Erastus Rabare
21. Richard Oreno Abayo
22. Philemon Agulo
23. Peter J. Akhonya
24. Benedict Juma Magero
25. Dorothy Akinyi Owino
26. Kizito Wangalwa
27. Justus Wawire
28. Alfred Aboki Omari
29. Linus K. Ngeno
30. Julius Nyakaka
31. Matagaro W.O.
32. Martin Opere



### **APPENDIX III**

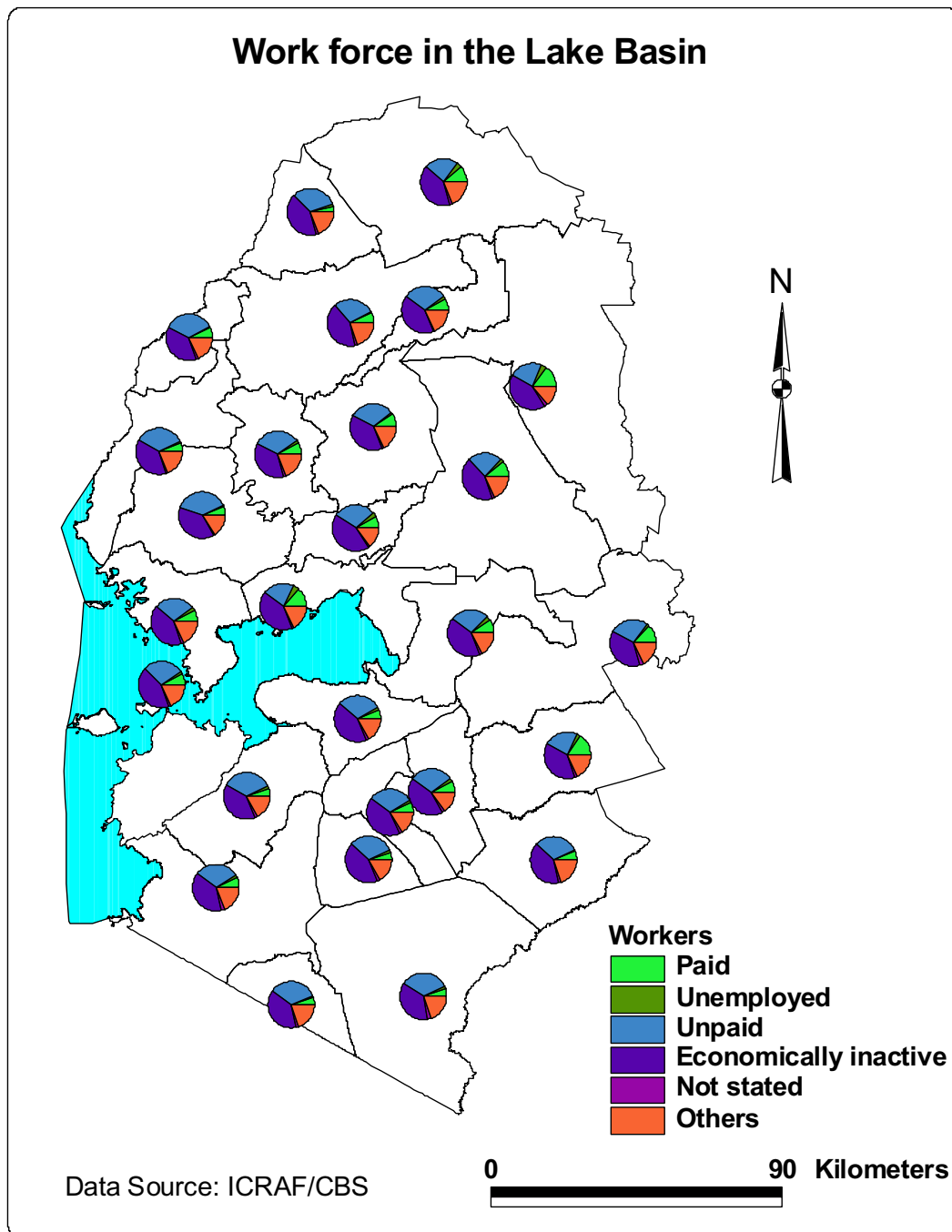
#### **Statistical highlights on the Lake Basin in Kenya**

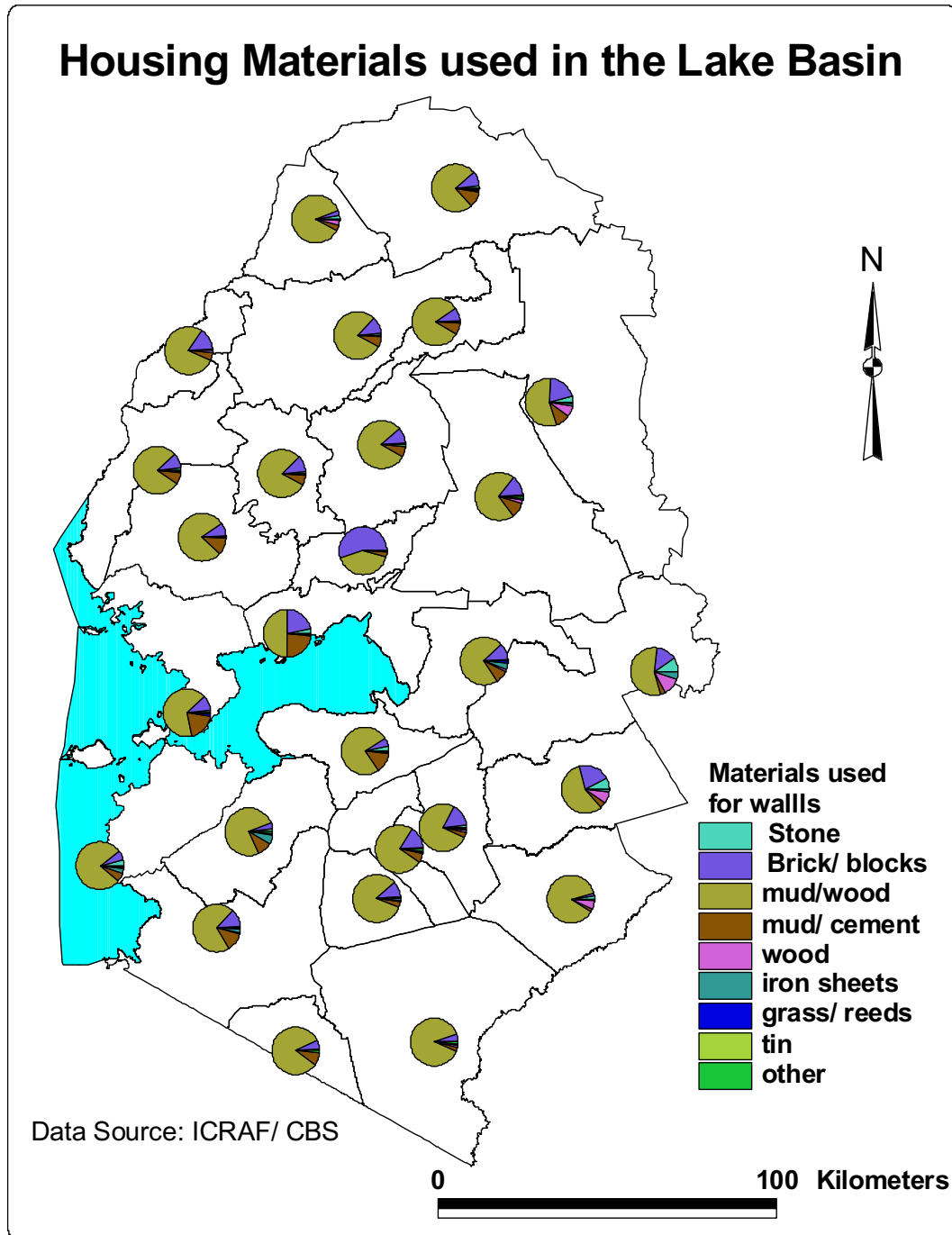
<b>DEMOGRAPHY/ PHYSICAL INFORMATION</b>	
Total population	<b>10,866,850</b>
Female population	<b>5,589,064</b>
Male population	<b>5,227,786</b>
Number of households	<b>2,300,154</b>
Area	<b>37,317 km<sup>2</sup></b>
Average density	<b>349</b>
<b>Climate</b>	
Average mean rainfall in main stations (1988-1995)	
Eldoret	<b>1077.4mm</b>
Kericho	<b>1933.9mm</b>
Kisii	<b>1922.8mm</b>
Kisumu	<b>1480.5mm</b>
Kakamega	<b>1968.1mm</b>
Kitale	<b>1185.4mm</b>
<b>Education</b>	
Literacy rates	<b>33%</b>
Illiteracy rates	<b>11%</b>
Persons that attended school	<b>3,639,472</b>
Persons that did not attend school	<b>1,163,654</b>
<b>Economic status</b>	
Not working	<b>1,021,367</b>
Persons working for pay	<b>957,943</b>
Unpaid persons	<b>3,189,149</b>
Unemployed persons	<b>223,326</b>
Economically active persons	<b>4,382,709</b>
Economic status not stated	<b>190,872</b>
<b>Housing material used for walls</b>	
Mud/ wood	<b>1,684,609 households</b>

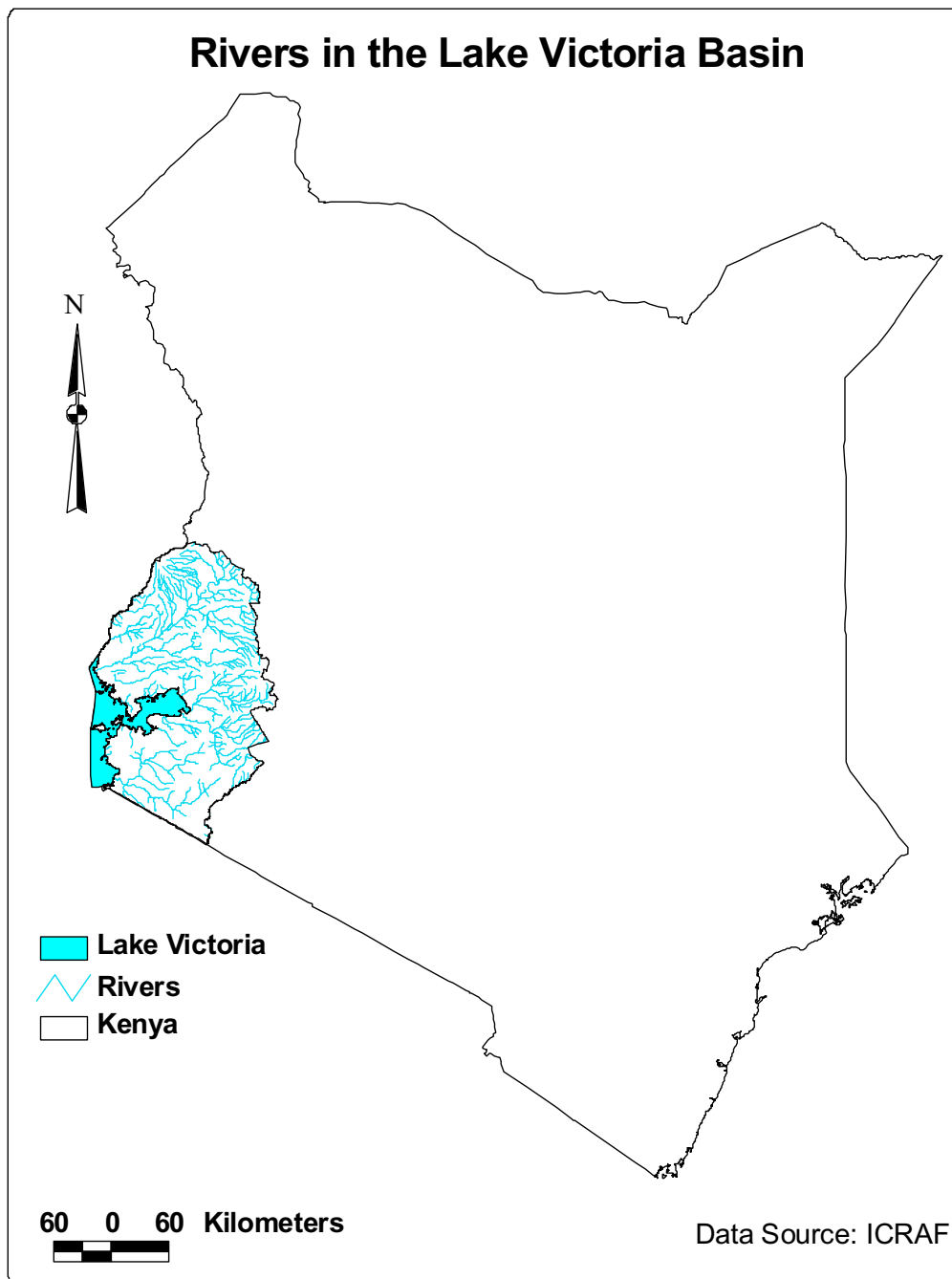
Source: CBS Census Data, 1999.

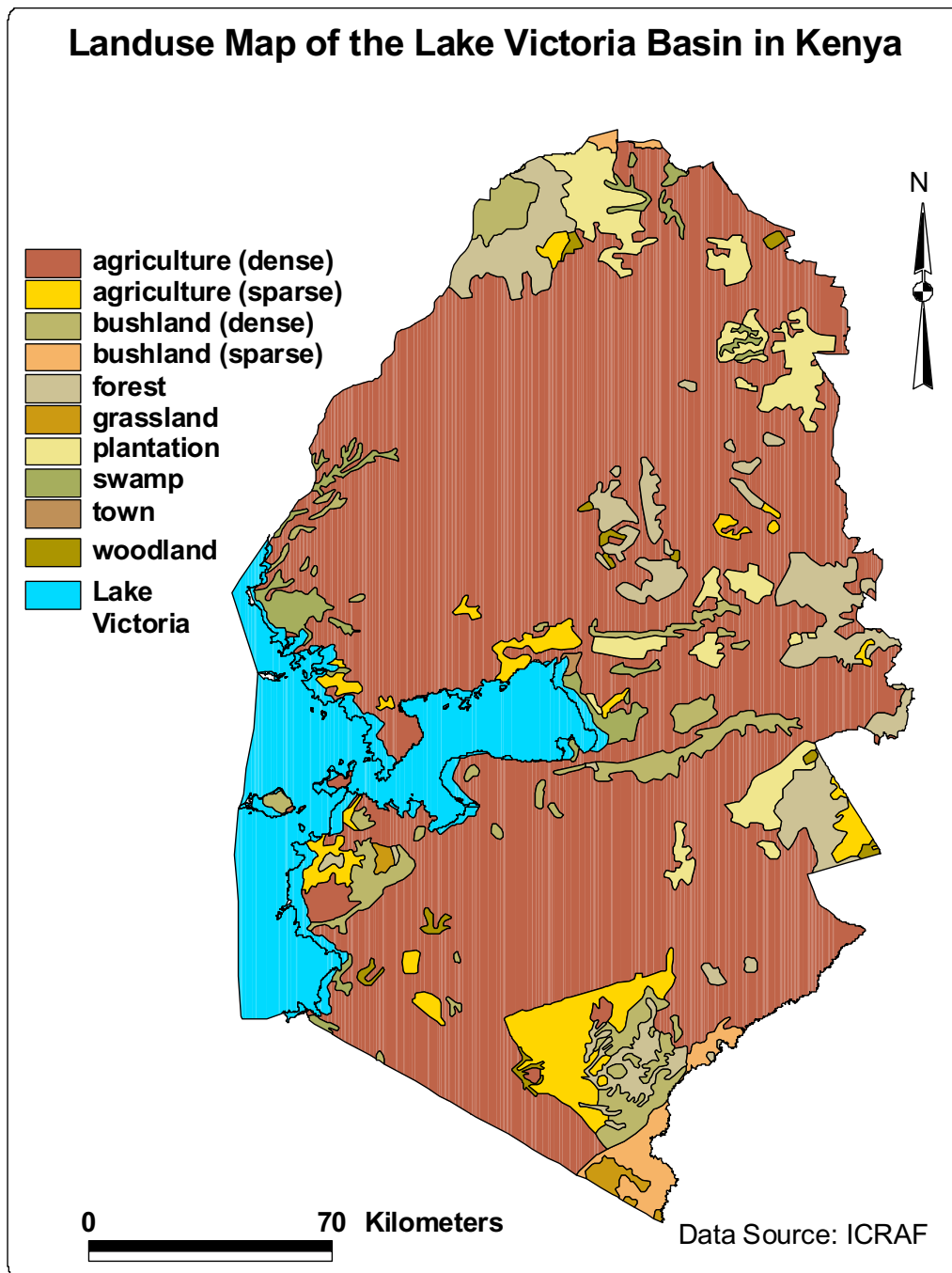
**Population Statistics per District**

<b>DISTRICTS</b>	<b>MALE</b>	<b>FEMALE</b>	<b>TOTAL</b>	<b>HOUSEHOLDS</b>	<b>DENSITY</b>
<b>Trans Nzoia</b>	286,836	288,826	575,662	116,122	231
<b>Mt. Elgon</b>	66,783	68,250	135,033	25,529	143
<b>Uasin Gishu</b>	315,932	306,773	622,705	134,490	187
<b>Lugari</b>	105,273	110,647	215,920	41,809	322
<b>Bungoma</b>	425,957	450,534	876,491	174,838	424
<b>Teso</b>	87,926	93,565	181,491	38,285	325
<b>Busia</b>	174,368	196,240	370,608	81,697	330
<b>Kakamega</b>	290,343	313,079	603,422	125,901	433
<b>Nandi</b>	290,003	288,748	578,751	112,713	200
<b>Butere / Mumias</b>	227,043	249,885	476,928	107,563	508
<b>Siaya</b>	220,997	259,187	480,184	117,955	316
<b>Vihiga</b>	232,720	266,163	498,883	105,701	886
<b>Kericho</b>	237,821	230,672	48,493	98,867	222
<b>Nyando</b>	146,635	153,295	299,930	68,371	257
<b>Rachuonyo</b>	154,793	161,333	307,126	68,152	325
<b>Buret</b>	162,703	154,179	316,882	64,737	332
<b>Nyamira</b>	239,851	258,251	498,102	99,701	556
<b>Homa Bay</b>	136,728	151,812	288,540	67,040	249
<b>Kisii Central</b>	234,448	257,338	491,786	100,315	758
<b>Bomet</b>	185,999	196,795	382,794	70,769	203
<b>Migori</b>	247,131	267,766	514,897	113,930	257
<b>Gucha</b>	221,249	239,690	460,939	89,776	689
<b>Trans Mara</b>	83,773	86,818	170,591	33,119	60
<b>Kuria</b>	73,989	77,898	151,887	28,839	261
<b>Kisumu</b>	248,735	255,624	504,359	123,341	549
<b>Suba</b>	75,167	80,499	155,666	33,987	147
<b>Bondo</b>	113,583	125,197	238,780	56,607	242
<b>Total</b>	<b>5,277,786</b>	<b>5,589,064</b>	<b>10,866,850</b>	<b>2,300,154</b>	<b>9412</b>

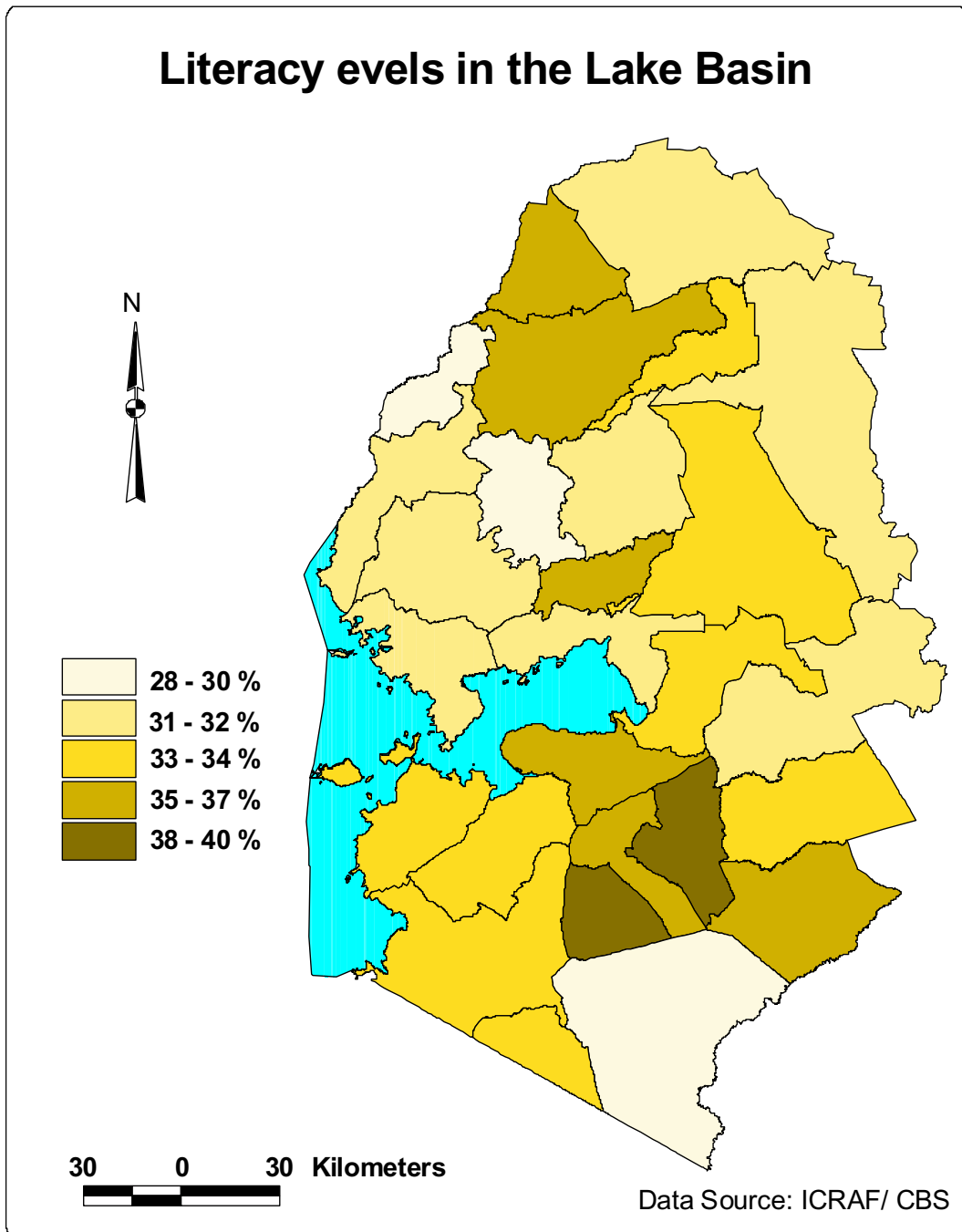


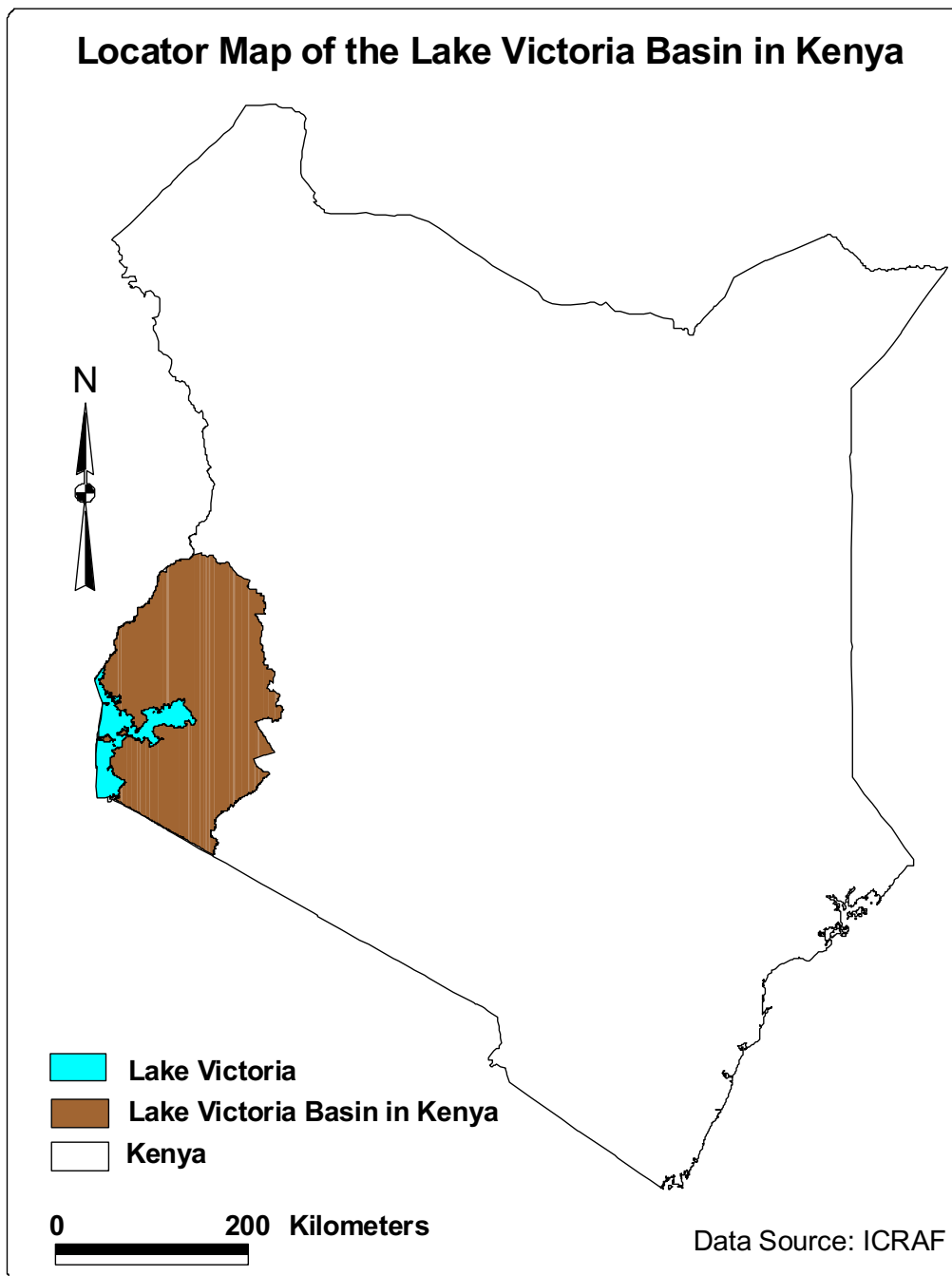


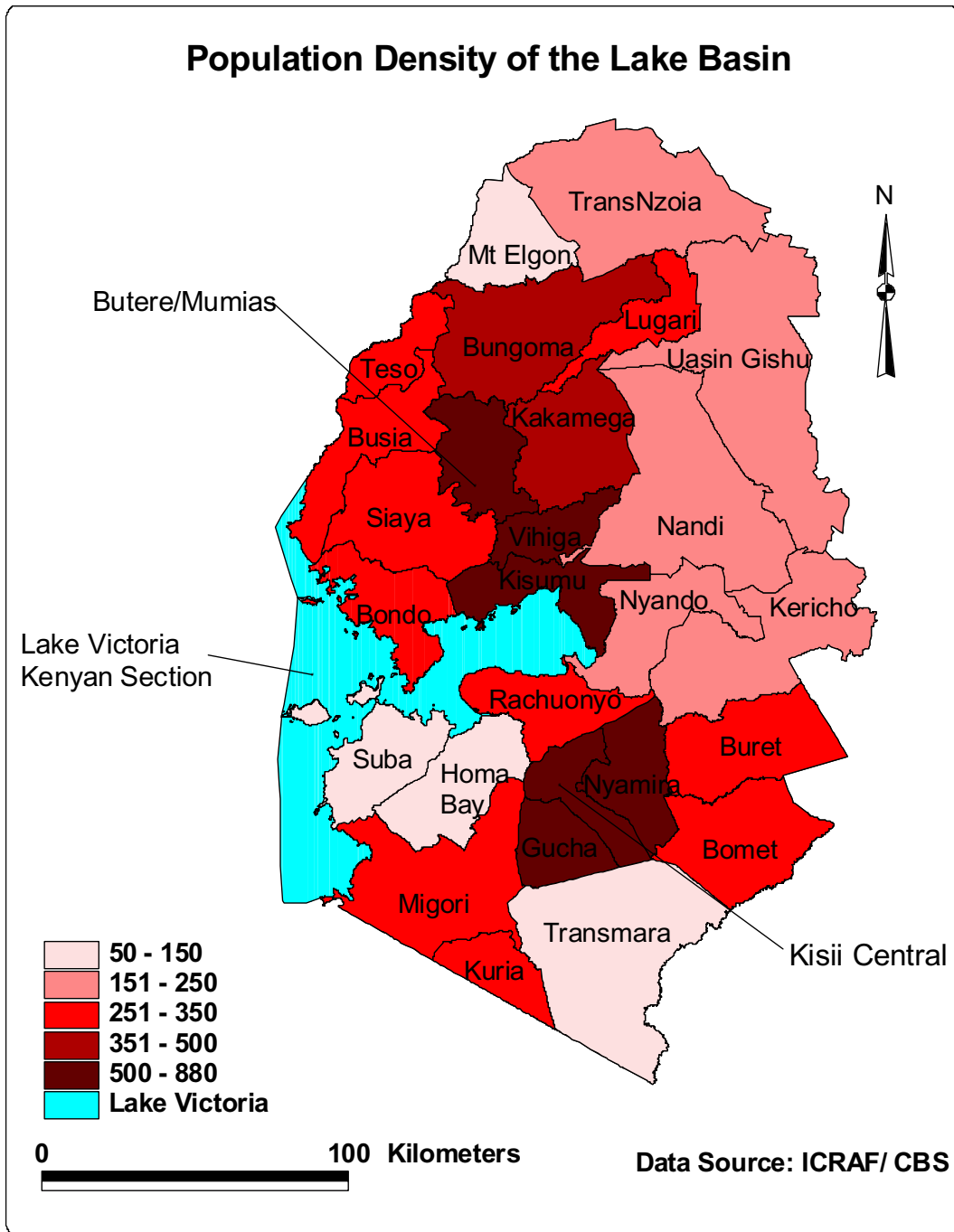


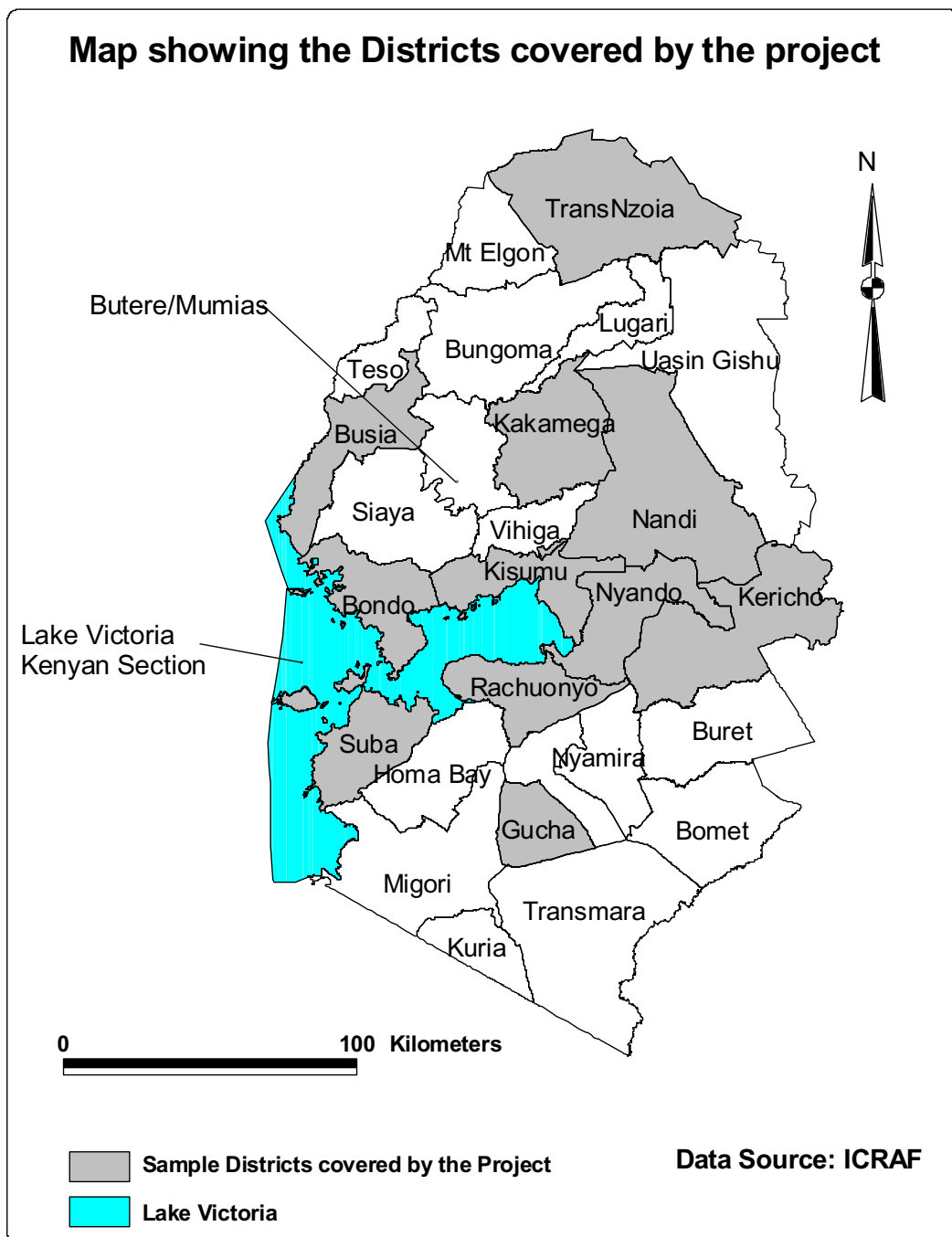


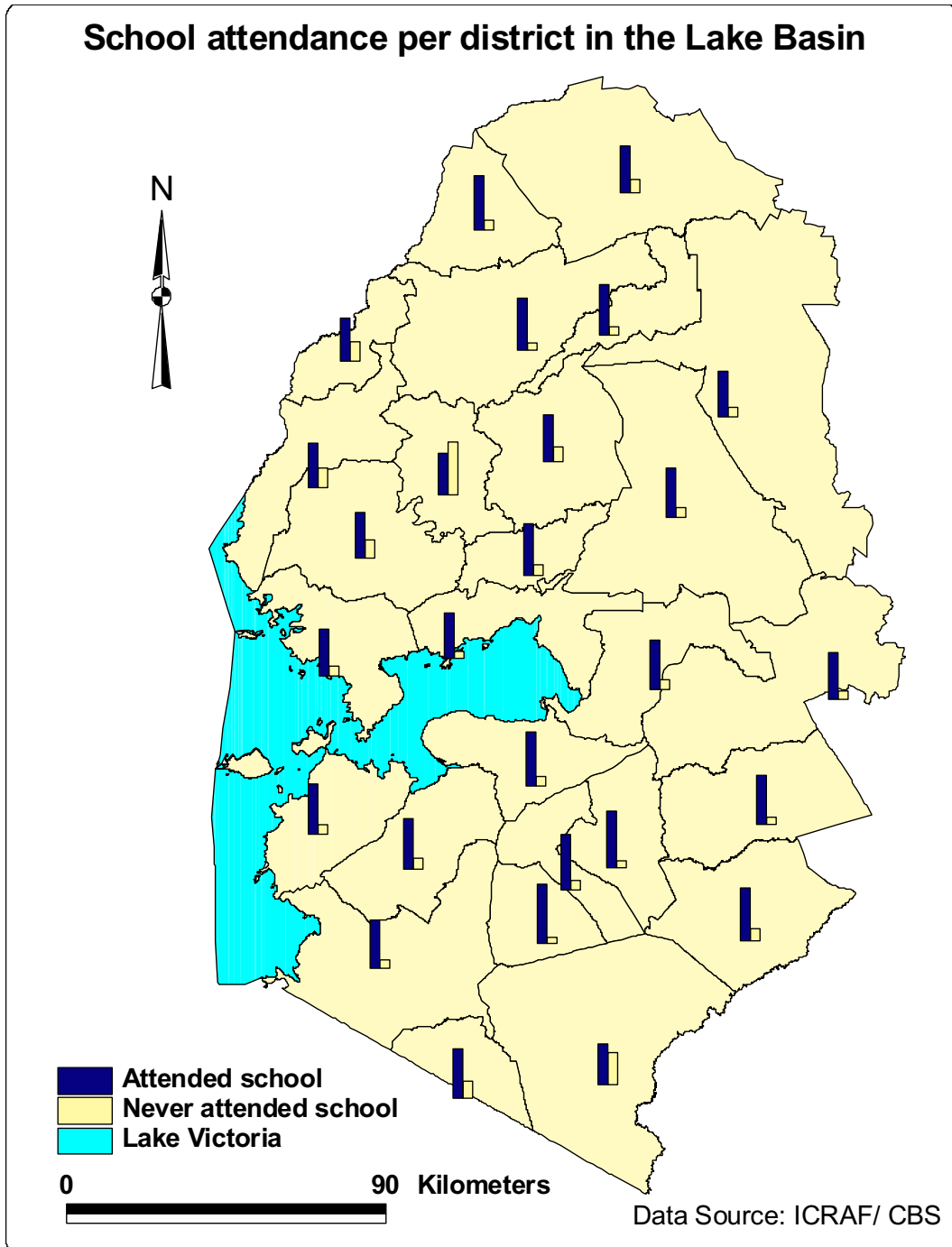




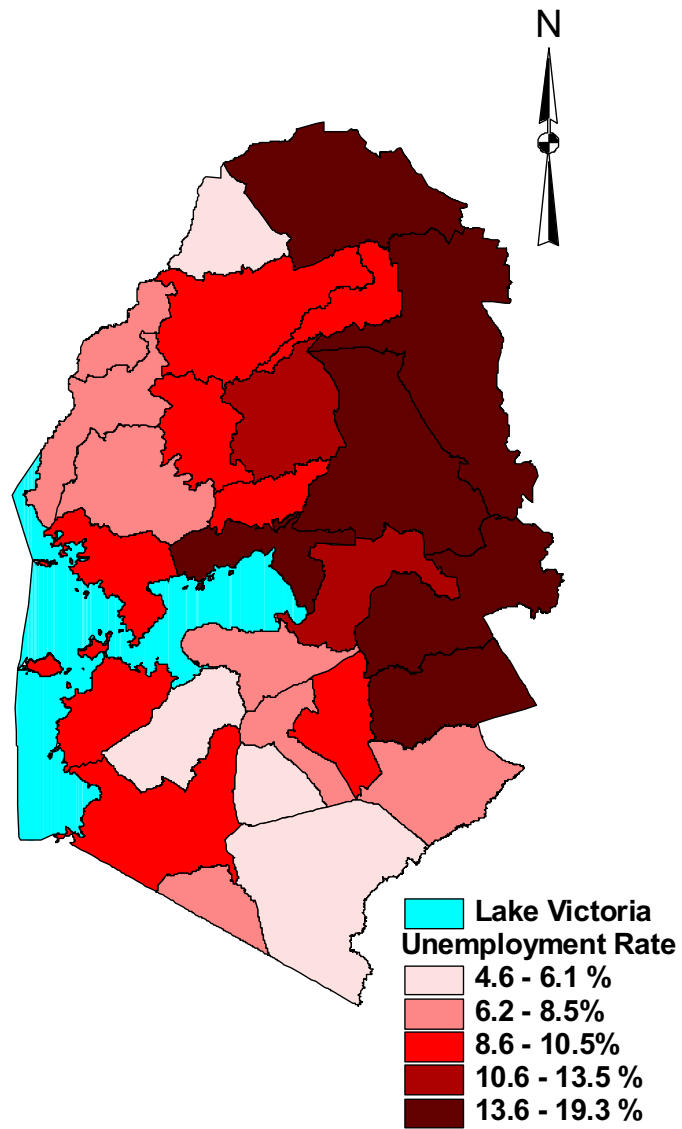








### Map showing the rate of unemployment in the Lake Basin



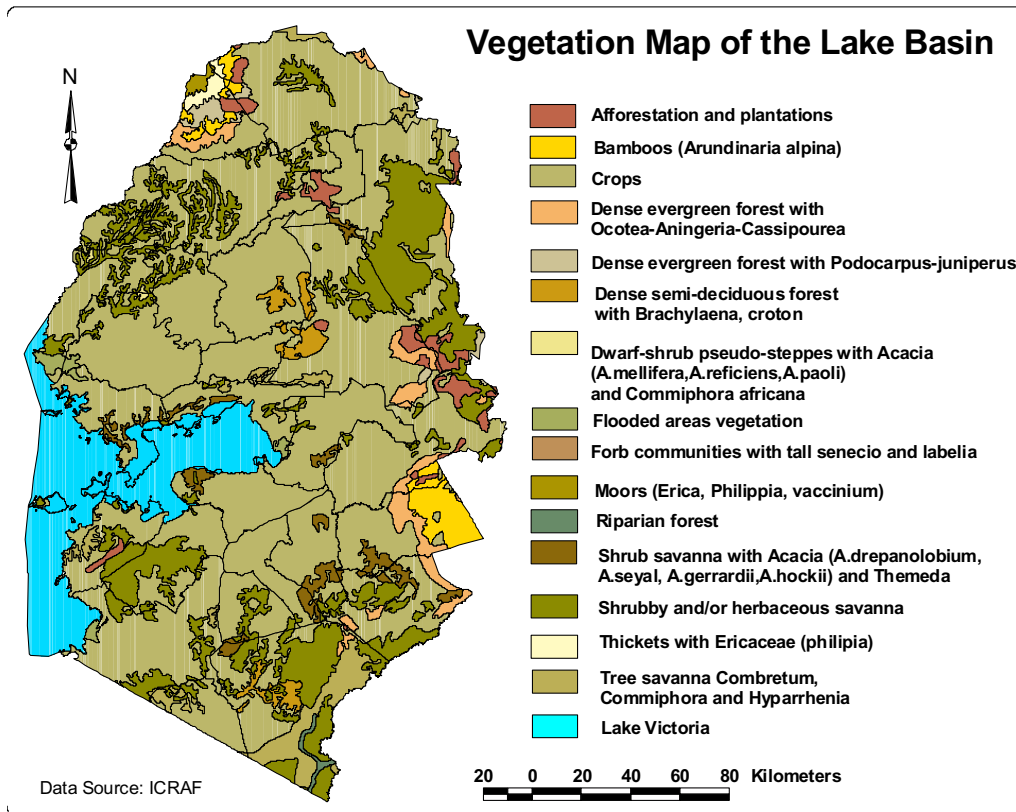
Data Source: ICRAF

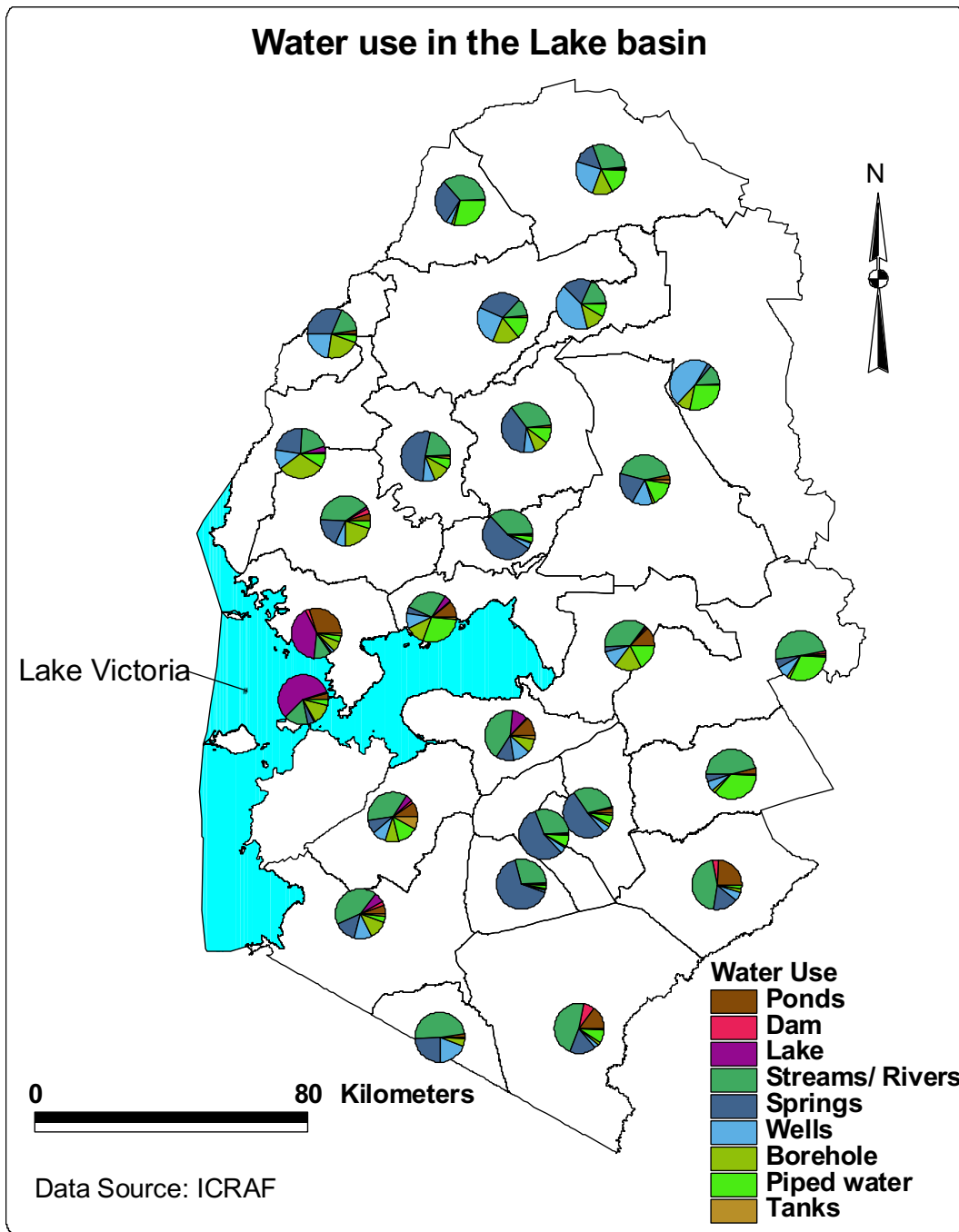
CBS, Census Data

0

100 Kilometers









# The Vision and Strategy Framework for Management and Development of Lake Victoria Basin

## Annex III: Tanzania Country Report



A report by

The Tanzanian National Task Force

September 2003



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## **LIST OF ABBREVIATIONS**

CBOS	Community Based Organizations
EAC	East African Community
IC	International Consultant
LVEMP	Lake Victoria Environmental Management Program
NC	National Consultant
NGOS	Non Governmental Organizations
NTF	National Task Force
RTF	Regional Task Force
VBP	Vision Building Program



## **EXECUTIVE SUMMARY**

1. The East African states after signing the EAC Treaty in 1999 declared the Lake Victoria Basin as an Economic Growth Zone. They have a commitment to develop the Lake Basin in a coordinated and sustainable manner under the control and management of a common regional body. Realization of the great potential for sustainable social, economic and environmental development the need for a shared Stakeholders Vision and a common framework for the development of policies and strategies emerged.
2. The strategic objective of the Vision Building Project is the development of an enabling environment that will encourage stakeholders' groups in the Lake Victoria Basin to work together to sustain a healthy and varied lake ecosystem that is stable and capable to support the many human activities in the basin area.
3. The implementation of the Vision Building Process started in all the East African countries in February 2002. In Tanzania it commenced with a stakeholders mapping workshop in Mwanza. The 16 members of National Task Force for the project was appointed by the Permanent Secretary of the Vice President's Office, Mr. R. Mollel in November 2002. The subsequent discussions.
4. Consultations in workshops and data collection using different methodologies were conducted in a participatory approach at various levels involving a total of 314,789 people from more than 31 villages in 18 districts of the Lake Victoria basin. The visioning process resulted into preparation of the Stakeholders Shared Vision that was presented in a National workshop involving technicians from various sectors and representatives from all levels of the Local Authorities and civil society with the aim to disseminate and validate the information.

To realize a Stakeholders Shared Vision and a regional common framework a two days East African workshop was organized in Nairobi in June 2003. In the finalization of the process a feedback of the regional framework for the development of the Lake Victoria Basin to the Communities and the Policy Makers is planned.

5. The following is a summary of the National Stakeholders Shared Vision.

1. **The Overall Vision for Lake Victoria Basin in Tanzania is:**  
"A Basin with the Resources Sustainably Managed and Communities having Equitable High Standard of Living."





## **2. Policy Area Visions:**

The various issues discussed during the workshops were analyzed and classified into six policy areas. Each policy area is supported with a vision and priorities for implementation that are ranked according to their importance to the stakeholders.

### **2.1 Policy Area 1: Ecosystems and Natural Resources Management and Environmental Protection**

**Vision:** Prosperous livelihoods and enhanced management of ecosystem and natural resources in Lake Victoria Basin.

**Priorities:**

1. Promote and strengthen large and small-scale sustainable fisheries development and management.
2. Increase agricultural and livestock productivity through sustainable use of land, water and other natural resources.
3. Integrate water assessment, planning, development and management (including water quality, management and pollution control, ecosystem and environmental protection).

### **2.2 Policy Area 2: Production and Income Generation**

**Vision:** Resources sustainably used and managed and productivity promoted with increased income levels of communities in the Basin.

**Priorities:**

1. Improving rural infrastructure and facilitating investment and financing in all sectors e.g. development of the sector specific incentive packages
2. Strengthening market efficiency for inputs and outputs in all sectors
3. Increasing productivity in all sectors.

### **2.3 Policy Area 3: Living Condition and Quality of Life**

**Vision:** A well educated society with high quality of life, well developed infrastructure and free from poverty.

**Priorities:**

1. Improve infrastructure.
2. Motivate and mobilize private investment in education.
3. Promote vocational training institutions for skills development.



4. Re-orient education towards self-employment and increase access to education by focusing on the equity issue with respect to women and disadvantaged groups.
5. Streamlining of the management structure of education by placing more authority and responsibility on schools to local communities, districts and regions.
6. Increased economic growth through increased investment in the productive sectors.

#### **2.4 Policy Area 4: Population and Demography**

**Vision:** The Lake Victoria Basin experiences improved quality of life of local communities through sustainable use of Basin resources while ensuring that the economic growth rate is above population growth rate.

**Priorities:**

1. Sensitize the public on the linkages between rapid population growth, natural resources utilization and development.
2. Counteracting and controlling HIV/AIDs.
3. Improving health infrastructure e.g. personnel, facilities and equipment.
4. Reducing infant mortality rates and maternal mortality
5. Improving life expectancy to 60 years
6. Improving security in areas close to refugees' camps.

#### **2.5 Policy Area 5: Governance, Institutions and Policies**

**Vision:** A prosperous community that observes the rule of law that is well integrated with institutional framework and supported by an enabling policy environment developed from the grassroots.

**Priorities:**

1. Impact civic education to the public
2. Ensure integrated and participatory planning in local government authorities with respect to the involvement of people in social, political and economic decision-making.
3. Create an environment that encourages people to form, join and engage in civil society organizations voluntarily in pursuit of their development and service delivery needs.
4. Strengthen the system of accountability, ethics and transparency at all levels of society.
5. Foster gender equality in decision-making, information, property ownership and control and opportunities.



## **2.6 Policy Area 6: Gender**

**Vision:** A community with equal participation in decision-making and access to resources ownership and control.

**Priorities:**

1. Equal access to education and training
2. Women empowerment in decision-making and politics.
3. Gender Mainstreaming in all activities.

6. The Team is grateful for the time and ideas, which community members, district authority leaders, staff at the government ministries, departments, agencies, academic institutions and CSOs have put in.

The Team was active National Task Force Members (NTF) and the National Consultant, Dr. Stigmata Chilla Tenga of ST Associates (Process Consultant and Facilitators).



## Chapter 1

### **Introduction**



## **1.0 INTRODUCTION**

This chapter provides the introduction to the project. It presents the project background; project aims and underscores the overall values and principles guiding the implementation of the Stakeholders' Vision and Strategy Development Process. This chapter also outlines the structure of the report.

### **1.1 Project Background**

Lake Victoria, the second largest freshwater body in the world, faces ecological imbalance. Natural resources in the Lake Basin are under heavy stress by a rapidly increasing population and unsustainable use. The Lake and its basin are a common source of food supply, water for domestic and industrial use, and the main recipient for human, agricultural and industrial waste. Introduction of exotic species poses a major threat to the sustainability of fish stocks. Increased eutrophication and the spread of water hyacinth resulting from human and industrial waste seriously reduce biodiversity and the diversity of species in the Lake. This reduction impacts on fish catches, the economics of the fishing sector as well as local food security.

With a population growth being among the highest in the world, accompanied with the weak regional policy framework and lack of agreements between the East African countries on how to manage the common resources in the Lake Victoria Basin, the level of conflict of interests increased in the late 1980s. Discussions to broaden the regional co-operation started in 1992. These discussions were triggered by the need for a shared ownership of the Lake and common interests in securing its ecological and economic health. The three riparian states realized high demands in collaboration to achieve a more sustainable development and sound resource management throughout the Lake Victoria Basin. The Lake Victoria Environment Management Project (LVEMP), started in 1997 with financial support from the World Bank and GEF, is one specific response to a growing understanding of the need to regard the utilization and management of common, trans-boundary resources as a regional challenge.

Initially, the interest of the international donor and development partners were concerned with the Lake only, and focused on fisheries and fisheries management, ecology, biology, hydrology, water pollution and related natural science issues. Socio-economic impacts of the accelerated deterioration of the ecological situation in the Lake Basin as well as effects of the changes in industrial activities, in particular the commercialisation of the fisheries received less attention. The same applied to issues of



devolution and decentralization of resources management and control, public participation, and regional harmonization of policies and regulations.

Overtime since 1997, a growing understanding emerged of the need to coordinate the many fragmented and partly donor driven foreign aid projects in the Lake Basin. With the signing of the EAC Treaty in 1999 the three partner states have declared ***The Lake Victoria Basin as an Economic Growth Zone***, and now have a commitment to develop the Lake Basin in a coordinated and sustainable manner under the control and management of a common regional body. Realization of the great potential for healthy and sustainable socio-economic and environmental development lies in combined efforts and integrated management of common resources across sector and national boundaries. From this shared commitment, the need for a shared Stakeholders' Vision and a common framework for the development of policies and strategies emerged.

Lake Victoria Basin Shared Vision and Strategy Development Project aims at engaging stakeholders of the Lake Basin in defining a vision for sustainable development of the areas and its people. The Stakeholders' Participatory Vision Development Process involved a broad range of stakeholders in a highly participatory manner aiming at harmonization of visions of various stakeholder groups across villages, districts, sectors, and other levels of governance. The process aimed at instilling ownership of the vision through developing strategies and formulating policies by the stakeholders themselves.

In Tanzania, Lake Victoria Basin Development is one of the priority areas for investment within the Country framework. The stakeholders' shared vision building process covered Mwanza, Mara and Kagera regions.

## **1.2 Aim of The Project**

The overall objective of the project is to develop a Stakeholders' Shared Vision and Strategies for the Sustainable Development of the Lake Victoria Basin with a focus on the guiding values and principles. Specifically, the objectives are to:

- Facilitate identification of all stakeholders living, and with relevant interests, in Lake Victoria Basin and its catchment's area;
- Facilitate the involvement and broad consensus of stakeholders in identifying a long-term vision (up to 15 years) of environmentally and socio-economically sustainable development within the Lake Victoria Basin and its catchment's; and





- Develop mechanisms that will enable stakeholders to advocate for their interests, provide feedback to the government and monitor progress towards achieving goals set.
- Publish the resulting draft Vision Statement and formulating Strategies, facilitating comments from stakeholders on its accuracy and facilitate redrafting of the Statement to take into account stakeholder comments.

The strategic goal of the Vision Building Project to which the National Task Force (NTF) was mandated to contribute is: development of an enabling environment that will encourage stakeholders groups in the Lake Victoria Basin to work together to sustain a healthy and varied lake ecosystem, which is inherently stable and that can support the many human activities in the catchments. The specific milestones to be achieved through the Project are the following:

- to help stakeholders to formulate a shared vision and agree to priority and strategic objectives that are realistic and achievable in a time frame of 15 years;
- To help stakeholders to define monitorable indicators, to measure the progress towards achieving objectives for LVEMP II;
- to provide instruments that allow stakeholders to advocate for their interests and to share information with each other and with the government; and
- to provide a basis for review and refinement of the vision during and after the implementation of the follow up program.

### **1.3 Overall Values and Principles**

The Stakeholders' Vision Building process in Tanzania strived to level the understanding and expectations of all the stakeholders, among them the Central and Local Governments, the Private Sector and Civil Society Organizations. Underlying the Stakeholders Vision Development were the overall values and principles of:

- People centered and private sector driven economic growth and effective cooperation between stakeholders;
- Social justice and equity; and
- Sustainable development and poverty alleviation.

Other specific values and principles that guided the Tanzania process include:



- Participation and true inclusion, Gender considerations and responsiveness, Delegation, Capacity building and Stakeholders' consultations and dialogue.

#### ***Participation and true involvement***

The implementation plan of the NTF activities took into account all possible social, economic and cultural barriers to involve and ensure participation of stakeholders. Most activities took place in communities closer to the people, with special attention to villagers' seasonal and daily activity schedules. By doing so, opportunity was provided for all-inclusiveness and ensuring that the process was not discriminating vulnerable, marginalized and special groups.

The process was highly informal and provided opportunity for all present to participate in discussions and making suggestions on the process, the vision and strategy developments. To minimize the language barrier, qualified local facilitators were identified and trained in objectives and the spirit of equal participation in the Project.

#### ***Gender considerations and responsiveness***

The process achieved 50% gender equality participation in village forums. It fell short of gender representation at the districts level where technical input was the criteria for participation; at this level women participants were only 15% of the total number of participants. The picture is worse with the composition of NTF whereby among 16 members only 2 are women (12.5%). At all stages, discussions deliberately collected included gender concerns.

#### ***Capacity building***

The process of vision and strategy development was keen to observe the need for everyone participating to have the capacity for dissemination and sharing of knowledge, information and expertise during the forums and through the mass media channels (TV, Radio and Newspaper). The process was intended to facilitate implementation of the strategies that the riparian communities would develop. From this perspective, the process built capacity that provided possibilities for future networking and collaboration.

The process aimed at and has witnessed the establishment and/or strengthening of the institutional and professional links that exist between the government, the private sector, civil society, and individuals. The positive effects of the capacity building efforts are seen in the stakeholders' commitment to transparency and accountability emerging as the process evolved.



NTF members were happy to work in smaller specific task groups, which were fully delegated with the responsibility to undertake certain specific activities on behalf of the NTF and report back within the agreed timeframe. The output of the specific task was discussed/debated and agreed upon with a consensus of NTF members.

### ***Stakeholders' consultations and dialogue***

The process took the advantage of the existing networks of the NTF members, which enabled formal and informal consultations to take place within a constrained time span. In the same ways, dialogue between the key parties contributing to the process was initiated.

## **1.4 The Structure of The Report**

The 15 years Vision and Strategy Development for the Sustainable Development of Lake Victoria Basin is presented in eight chapters.

Chapter 1 of the report presents the introduction to the Vision Building Project. The chapter covers objectives of the project, overall values and guiding principles and the report structure.

Chapter 2 describes the project implementation. This chapter also underscores the project organization, roles and responsibilities. Furthermore, it outlines the process and methodology employed in carrying out the project and it discusses the activity plans, timelines and milestones. Also, it provides a description of critical events and adjustments made in the process approach and methodology, the stakeholders' involvement and the project output. And, it presents the problems and challenges faced in implementation.

Chapters 3, 4, 5, 6, 7 and 8 present the information in six policy areas of: ecosystem and natural resources management and environmental protection; production and income generation; living conditions and quality of life; population and demography; governance, institutions and policies; and gender. Each policy area provides information on the background information, current status (problems and challenges), priorities the visions and strategies to the Sustainable Development of the Lake Victoria Basin.

Finally, the Appendix in a matrix form gives the summary of stakeholders' development vision and strategy framework of the six policy areas for 15 years.



## Chapter 2

# **Project Implementation**



## **2. PROJECT IMPLEMENTATION**

This Chapter details the project organization and implementation of the activities. The organizational arrangements of the project were proposed in the Technical Proposal of the International Consultants, as well as the work plan (time schedule and activity plans) for the NTF. The later was interpreted by the National Consultant and shared with NTF members during the official NTF Launching Workshop for discussion and their adoption. The first adopted version was not implemented as planned due to time constraint and lack of adequate financial resources. Detailed information is given in Appendix 2.

### **2.1 Project Organization, Roles and Responsibilities**

#### ***The Client***

The Government of Tanzania is the main Client for this Project. The project is under the coordination of the East African Community Secretariat. The Government of Norway through the World Bank funded the vision and strategy development process for the project. The Government of Tanzania provided guidance and advice to the process.

The EAC role and responsibilities include supervision of the overall Project coordination, provision of guidance and policy guidelines, mobilization of additional financial resources for the NTF activities, as well as receive and approve final reports.

#### ***National Task Force (NTF)***

The government as custodian of community information constituted the National Task Force (NTF). With support of government, local authorities, private sector and civil society organization staff and village facilitators, the NTF conducted consultations with people and stakeholders of 18 districts of the Lake Victoria Basin.

According to the Terms of References for the Project, the roles and responsibilities of NTF are as follows:

- Organize and conduct workshops, seminars and meetings at all levels (from the grassroots to ministerial levels) concerning the national vision for the LVEMP follow-up;
- Disseminate and exchange information and knowledge across the Lake Victoria Basin with the aim to facilitate discussions among government, civil society, and private sector within the targeted project area.
- Give advise on reviewing the present LVEMP; and



- Provide feedback of preliminary visions and strategies to all groups across various regions to establish whether concerns are met or not.
- Present the national priorities to the Regional forum and contribute to the process of developing a Stakeholders' Shared Vision for the three riparian states; and
- Ensure feedback is given to the Community and country stakeholders at large on the National Priorities, the Shared Vision and Strategies.

### ***National Consultant (NC)***

The National Consultant, Dr. Stigmata C. Tenga of Process Consultants and Facilitators was recruited by the World Bank to undertake a multiple of assignments. The consultant had to interpret the intended vision development process, plan and coordinate activities, advise all the relevant stakeholders in the process; conduct training for capacity building of NTF/facilitators and provide backstopping in the organization of consultation forums; advise and participate in the drafting of the conflict management and equal participation strategies. The National Consultant was also required to access, disburse and account for financial resources of the Project. In addition the consultant was required to prepare progress reports and facilitate the production, packaging and presentation of the Final Draft of the National Vision and Strategy Document; and submit to the Government of Tanzania, the EAC through the International Consultant, Statkraft Groner AS and to the World Bank.

### ***LVEMP and the Division of Environment***

These institutions have played an important role to the success of the NC and NTF work. They provided logistical support and advise, facilitation in the constitution of NTF, linking NTF members with key stakeholders, complement NTFs in mobilization, and provide a link for information flow at all levels of project implementation.

### ***International Consultant (IC)***

The role of the International Consultant, Statkraft Groner AS was to provide guidance during project preparation stage, act as primary supervisor and assist the EAC Secretariat to facilitate the harmonization process of national priorities.

### ***Regional Task Force (RTF)***

The role of the RTF in the implementation of the Project is not quite clear to the NTF. However, according to the EAC guidelines for formulation of the RTF provided during the Project Inception Meeting in Kampala July 2002, the role of RTF include the provision of strategic linkage with EAC, harmonize contributions from partner states including the final vision and strategy development process, ensure that NTFs implement the





processes properly (i.e. act as a watchdog), and confirm that feedback mechanisms are taking place.

***The World Bank***

The World Bank is a paymaster and provides liaison with other donor partners, especially NORAD on issues concerning financial resources and progress.

**2.2 The Process (Time Schedule, Activity Plans and Milestones)**

The implementation of the Vision Building process for the Lake Victoria Basin in EA started back in February 2002. However, the process in Tanzania in 2002 was very slow. Thus, active and steady implementation began in April 2003. By early June the National Shared Vision was completed. This Stakeholders Vision for Tanzania would be merged with Ugandan and Kenyan visions to form a Regional Shared Vision for the riparian countries.

The process for vision building followed in Tanzania and activities covered so far include the following:

***Stakeholders mapping***

The process started with the stakeholders mapping workshop, which was held in Mwanza in February 2002. LVEMP Secretariat organized the workshop. At this point in time the National Task Force that is charged with the overall responsibility of organizing and carrying out stakeholder facilitation process had not been appointed.

***Official Commissioning of the National Task Force***

In November 2002, the Permanent Secretary of the Vice President's Office, Mr. Raphael Mollel, officially commissioned the 16 members NTF. Attending this official NTF launching workshop on 26-27 November was also the World Bank representative Dr. Ladisy Chengula, representatives of key government departments (namely: poverty eradication, youth development and employment, community development women affairs and children), and the International Consultants, Mr. Terje Kleven and Dr. Manoris Meschack. The National Consultant, Dr. Stigmata Tenga organized and facilitate the workshop.

Members of the NTF are the representatives of the government ministries and departments, district councils, civil society organizations and LVEMP Secretariat. The membership of the NTF strictly followed EAC guidelines for formulation of the NTF in the riparian countries provided in the Inception Meeting of July 2002 in Kampala, Uganda. The mandate of the NTF is largely to spearhead the people centered participatory process of



developing a Vision and Strategy for the Management of Lake Victoria Basin in Tanzania for the next 15 years.

### ***Village Visions and Strategies Development***

At the village level visioning and strategy development workshops and focus group discussions were conducted. The methodology used was highly participatory focusing on open dialogue with villagers while describing the status (stresses, challenges, concerns, trends, and interests from the Lake), their visions and putting-up strategies to realize the visions and performance indicators.

It is important to point out that due to financial and time constraints it was not possible to include all villages of the Lake Basin in the process. A representative sample basing on economic activities, ethnicity and social cultural settings were deliberately chosen to participate in the vision building process. A total of 31 villages consisting of 314,789 (50% being women) were involved in this participatory data collection exercise. These selected representatives have participated in the process and contributed to the visions and strategies development process.

### ***Sample interviews with stakeholder groups and Focus Group Discussions***

Sample interviews and focus group discussions were carried out with special interest groups of the Lake Victoria Basin stakeholders (i.e. artisan miners, petty traders, tourist potential areas, fisher folks and Island dwellers).

### ***District workshops***

The vision and strategy development exercise involved 18 districts of the Lake Basin in Tanzania. Workshop participants included the villagers, local authority officials, and members of the NTF. The team of the International Consultants was also represented. The district workshops were conducted between 12<sup>th</sup> and 28<sup>th</sup> April 2003.

### ***Sector interviews at the Ministerial, Departments and Agencies***

NTF were also assigned to conduct sector interviews, guided by the generic guidelines for sector interviews provided by the International Consultant. Sector interviews were conducted parallel with the district workshops from 12<sup>th</sup> to 28<sup>th</sup> April 2003.

### ***Information dissemination and knowledge sharing through media***

Media and press was used as a means to disseminate information about the Project and wider coverage of stakeholders' consultations. Both, electronic and print media were used to fulfill these objectives. On the electronic media, two television stations (ITV and Star TV) and three radio stations (RTD, Radio Free Africa and Radio One) were involved in



obtaining people's views on vision and strategy development. In addition, different newspapers were involved such as The Guardian, Daily News, Nipashe, Mtanzania, Msanii Afrika, Majira and Mzawa, to mention a few.

### **2.3 Critical Events and Adjustments to the Approach and Methodology**

The visioning process in Tanzania as mentioned above was adjusted to suit the limited financial resources made available for the NTF and the tight deadlines. One of the important adjustments done to the approach was conducting concurrent activities as opposed from consecutive activities as per original plan. Following these adjustments, information collected from three main field events was analyzed at the same time.

The synthesis and analysis of the field information was interrupted when the NTF had to quickly map out the information in order to produce a progress report for the Regional Meeting in Arusha in May 2003.

Another planned adjustment was extension of the national workshop duration to three (3) from the originally proposed two (2) days for all three riparian states. The adjustment was made by the national stakeholders to give an opportunity of wider consultations and validation of field information

### **2.4 Stakeholders and Institutions**

The following stakeholders and institutions were involved at different stages of implementation of the vision and strategy development process:

#### ***Civil Society***

Civil Society Organizations (NGOs, CBOs and Media) dealing with multi-sectoral development program, different interest groups, farmers, and fisher folks, miners and HIV/AIDS victims participated in the process either through the NTF membership or consultation fora. In addition, media and press were used as a means to disseminate information about the Project and air peoples' views about the stresses and aspirations of the sustainable development of the Lake Victoria Basin.

#### ***Private Sector***

The private sector was involved in the form of small-scale business operators, artisan miners, micro financial institutions, fish processors and service providers. These were known to have a substantial impact on the employment and the welfare of the people in the target area. Some of the private sector organizations were reached through organized focus group discussions and some through sector interviews. While it was revealed that the private sector controls the economy of the lake area to the large extent, the sector is largely in the hands of non-indigenous people.



### **The Government**

The involvement of the Central and Local Governments was very high and inevitable to the process. Leaders of the village government provided support in the mobilization of the villagers. At district level District Executive Directors, extension officers, community development officers, natural resources officers and planning officers played a very important facilitation role in acquiring good quality information. At the policy level, senior planners, natural resources experts, land officers, agriculturists, environmentalists, educationists and trainers, health specialists, gender experts etc, were also involved.



## Chapter 3

### **Policy Area 1 Ecosystems and Natural Resources Management and Environmental Protection**



### **3. ECOSYSTEMS AND NATURAL RESOURCES MANAGEMENT AND ENVIRONMENTAL PROTECTION**

#### **3.1 Introduction**

Ecological health and the goods and services the ecosystem of the Lake Victoria Basin provides are the basis for sustainable development in the area. Future development of land and water resources for different purposes such as forestry, wetlands, agriculture, fisheries, livestock, wildlife, and industries, to mention a few, as well as the alleviation of poverty and health problems rely vitally on a healthy environment. Sound natural resources and environmental management is, therefore, an integral part for sustainable economic development. The current pressures arising from the increasing population and, hence, the social economic activities have resulted into changes in land use, water quality, biodiversity, wetlands and fisheries. As a result fish stocks are decreasing, biodiversity has declined, algal blooms are more frequent and turbidity of water is increasing.

The lake ecosystem is being seriously impacted upon by water hyacinth. A sustainable, healthy development of Lake Victoria Basin should link all the necessary dimensions of ecosystems, natural resources management and environmental protection. This chapter therefore, provides the basis for vision building prioritizes the issues and recommends appropriate strategies for implementation with respect to ecosystem, natural resources management and environmental protection.

#### **3.2 Background Information**

##### **3.2.1 Water Quality Management and Pollution Control**

The options for using water depend on its water quality. However, increased human activities including poor land use practices, as well as uncontrolled abstractions and pollution of water bodies impact on the quantity and quality of the available water resources. The environmental dimensions of water management in Lake Victoria have become an important priority because of accelerated eutrophication and other forms of degradation of the resource base. Nutrients from municipal sewage from Mwanza, Bukoba and Mara, as well as from thousands of communities settled near the lakeshores, from most of the industries in the region and non-point pollution source from agricultural runoff and soil erosion in the Basin have accelerated eutrophication of the lake. Shipping and boating also contribute to pollution.

The lake now experiences frequent and massive blooms of potentially toxic blue green algae. Dissolved oxygen levels are permanently depleted at lower levels and fish killings are frequent occurrences. Industrial and urban waste discharges are contributing toxic substances to the problem.





Atmospheric deposition and catchment nutrient loads are the major sources of pollutants into the lake. Poor urban planning has caused difficulties to improve delivery of basic support services e.g. sewers and solid waste collection. The state of the lake basin environment has limiting implications to socio-economic development of the immediate basin community and the nation at large.

### **3.2.2 Water Resources**

The Lake has an area of 68,800 km<sup>2</sup> (51% of total Lake area lies in Tanzania), mean depth of 40m, a shoreline of 3,500 km and a volume of 2760 km<sup>3</sup>. The lake area within Tanzania is 35,880 square kilometers. Within Tanzania, the Lake Victoria Drainage Basin (LVDB) encompasses the following regions: Mara (100 percent), Mwanza (100 percent), Kagera (90 percent), Shinyanga (35 percent), and Arusha (5 percent). The lake is recharged mainly by rainfall in addition to rivers draining the surrounding catchment. The water resources in the Lake Basin comprise of surface and ground water and water-based ecosystems (largely lakes and wetlands) are essential for the sustenance and health of all human, animal and plant species. The main rivers draining into the lake are: Kagera, Simiyu, Mbaraget, Grumet, Mara and Mori. Grumet and Mbaraget Rivers drain the Serengeti National Park.

Water resources in the Lake Basin are a primary input for a whole array of human needs and economic development activities. As a sink, water sources are used as receptors for wastewater discharges from municipal, industrial and agricultural sources. Freshwater also sustains the integrity of ecosystems including securing the conservation of biodiversity and ecosystem functioning of wetland and forest areas, which serve important ecological and hydrological functions.

The Lake also provides a major transport route for people and goods. Despite its importance the water resources in the basin are inadequately distributed. In some areas due to inadequate water people heavily depend on rainfall. It is estimated that less than 40% of the people in the rural areas and about 55% in urban areas around Lake Victoria Basin have access to safe and clean water within acceptable distances. In many places people have to walk long distances in search of water. Lack of clean and safe water contributes towards water borne diseases such as cholera, typhoid and bilharzias.

The present population in the Lake Basin in Tanzania is increasing at 2.9% per annum. The growth in population is not only exerting more demand for more water supply services but also calling for significant increase in sanitation and sewerage services.



### **3.2.3 Fisheries Resources**

The fisheries sector has a lot of economic and social significance to the community around the basin. It provides source of employment and livelihood to a substantial number of people. It is estimated that fisheries production from Tanzanian side is about 170,000 tons annually, engaging about 74,000 full time fisherman operating a total of 20,000 fishing vessels. There has been rapid buildup of fish processing factories around Lake Victoria in response to international demand for Nile perch. Presently, methods adopted to manage the fisheries industry are to regulate the fishing period, fishing operations in special areas, and fishing methods through fishing laws. A system of fishing boat registration and licensing has been enforced, but no regulations pertaining to fishing restrictions are in place. Currently there is limited scientific data on the development potential of fishery resources. Under the 1997 national policy to promote fisheries, the national development potential of fishery resources was estimated at 200,000 tons per annum. The sector wholly depends on water resources of required quantities and quality; otherwise it is vulnerable to environmental degradation.

### **3.2.4 Agriculture and livestock**

(i) **Agriculture**

Agriculture is the most important economic activity in the Lake Victoria Basin providing food for the rapidly growing population, raw materials for the agro-industries, employment as well as foreign exchange. Still, agriculture is the most important complementary activity even among the fish traders and fishermen. The majority of the farmers in the Lake Victoria Basin are engaged in subsistence agriculture, which is characterized by small land under cultivation and poor farming technologies like hand hoe, shifting cultivation and limited use of inputs.

There are several farming systems in the Lake Victoria Basin influenced by agro-ecological zones determined by rainfall, temperature, geology, landscape, and population density. The main crops grown include coffee, cotton, bananas, beans, paddy, millet, cotton, sugar and tea. In addition to land pressure, farmers use inferior agricultural technologies, they are faced with pests problem and inadequate irrigation facilities, soil exhaustion, soil degradation and inadequate extension services. Furthermore, technical advice and innovations on soil fertility are either rudimentary or non-existent. On the other hand the sector is highly vulnerable to drought and erratic rainfall, and floods.

(ii) **Livestock**



In Tanzania, the Lake Victoria Basin area is estimated to have a total of 4 million livestock (about 61 livestock per square kilometer), which include cattle, goats, sheep, chicken and donkeys. Indigenous breeds characterizes livestock production in the Basin whereby only about 28 thousands of cattle are improved or exotic breeds. The development of livestock is constrained by poor breed, inadequate grazing pasture, drought stresses and inadequate or unaffordable veterinary services. Technological innovations such as zero grazing are limited to a few farmers in the highlands who keep diary cattle. Farmers are reluctant to adopt improved breeds for fear of losses due to the limited feeds and veterinary services. The sector is also vulnerable to drought and suffers from insecure water resources.

### **3.2.5 Forestry**

The forests in the Lake Basin offer genetic resources and unique natural ecosystems. Forests are habitat for wildlife, beekeeping, and provide bio-energy, which is the main source of fuel for rural population and accounts for the major part of the total energy consumption. There are 52 forest reserves in the Lake Basin. Natural forests in Kagera region cover 51.5% of the total area. Most of this is dense forest, open forests or shrubs. In Mara, about 1,550,900 ha are under forest while in Mwanza only about 0.68% of the regional land is forest. Natural forests are threatened by the expansion of settlements, forest fires, mining activities, overgrazing, illegal harvesting, and demand for agricultural land. The sector contributes between 2.3% and 10% of the country's registered exports. This contribution is probably underestimated because of the unregistered consumption of wood fuels, bee products and other forest products. Alternative sources of energy are not fully exploited. Petty trading, charcoal making, brick and pot making and local brewing consume large quantities of wood. Unsustainable forest utilization has contributed significantly to the depletion of the natural vegetation cover in the Lake Basin (Mwanza Region in particular), which increase land degradation especially soil erosion and sedimentation.

### **3.2.6 Wildlife**

Lake Victoria Basin has a rich and diverse wildlife species including globally threatened and a wide variety endemic species. This resource has a great potential for earning a considerable amount of local and foreign income, providing employment, food and other benefits through sustainable use. The Lake Victoria Basin has a rich diversity of wildlife such as the rare rothschild girrafe, the fashsons hartebeests, elephants, needbuck, topi, eland, waterbuck, endangered sitatunga, zebra, dikdik, monkeys, pangolins, reptiles, butterflies, leopards, lions, buffalos, tangos, roan antelope, warthog, forest birds, and blackhippo.



### **3.2.7 Mineral Resources**

Mineral resources in Lake Victoria Basin include apatite, graphite, ilmenite, carbonatite, copper, gold, diamond, radioactives, rare earths, iron, limestone, silver, soapstone, tin, nickel, and dimension stones. Phosphate rock also exists in the area. Since early 1990s up to now, mining of these minerals has attracted foreign investors, which include both large and small-scale mining operations. Small-scale mining operators and artisanal workers engage largely in mining of building materials namely sand, stones and clay. This sector requires secure water resources and prevention of potential pollution from mineral processing.

### **3.2.8 Energy**

A large proportion of the rural population depends on forest resources to meet the firewood needs. In addition to other forest products, the sustainability of forest resources has increasingly become questionable.

### **3.2.9 Land Resources**

The Lake Victoria Basin covers an area of 115,380 square kilometers in Tanzania, representing about 46 percent of the total Basin area (258,700 km<sup>2</sup>), which also extends into Burundi, Kenya, Rwanda and Uganda.

The aims of the National Land Policy (1995) is to promote and ensure a secure land tenure system, encourage the optimal use of land resources and facilitate broad-based social and economic development without upsetting or endangering the ecological balance of the environment.

### **3.3 Current Status: Problems and Challenges**

Lake Victoria Basin is made up of a great variety of ecosystems that provide a wide range of goods and services for the population in the Basin. The Basin has become under pressure for a variety of reasons as described above. The stresses and changes on the ecosystems in the Lake have occurred in water quality, nutrient recycling and food web structure leading to disturbed biodiversity. The main areas of concern includes increased pressure on water resources, habitat loss along the Lakeshore, forest degradation, floodplain degradation, decrease in fish biodiversity, invasion of water hyacinth, pollution from point sources (industrial discharges) and non-point sources (from agricultural runoff) and wildlife degradation due to loss of habitat, forests and poaching.

Pollution in the Lake Basin has been aggravated by domestic, industrial, mining and agricultural activities. However, inadequate sectoral environmental legislations and regulations coupled with weak enforcement capacity have contributed in deterioration of the ecological integrity of the basin. Wastes have become an increasing problem posing threat to human health and the environment, particularly in urban areas where the



standard of life and consumption patterns are higher than in rural areas. The capacity of most municipal councils is, indeed, low compared to growing demand for sound management of solid wastes. There are technical and financial barriers for enforcement of laws. Inadequate urban planning aggravates the problem. About 70% of urban residents live in unplanned areas where basic services are inadequate. Air pollution is a growing concern in the urban centers. Burning of wastes at disposal sites is a common practice causing emission of toxic fumes to the atmosphere. By laws in most municipalities and cities are not strong enough to bring the desired change.

Water is a primary input for our social and economic development. However, water resources in Lake Victoria Basin are invariably distributed, and there is low level of water resources development. Integrated water resources planning, development and management is also lacking. Lack of accessible, safe and clean water contributes towards waterborne diseases such as cholera and typhoid. The undermining factor for the socio-economic potential of the fishery sector is inefficient management of fisheries, over-exploitation and degradation of the fish habitats. Furthermore, rapid population growth coupled with inadequate supporting services (extension, credit facilities, research, marketing etc) has led to low agricultural productivity in the basin. Deforestation and loss of wildlife habitats are also the consequence of high population pressure.

### **3.4 Priorities**

Sustainable management of ecosystems, natural resources management and environmental protection is of paramount importance in achieving sustainable development. Cognizant to this fact, the following are the main priority areas in order of their importance for intervention:

#### **3.4.1 Water Quality Management and Pollution Control**

- In-lake water quality monitoring;
- Industrial and municipal waste management;
- Management of pollution loading;
- Promoting sustainable industrial development; and
- Awareness raising and voluntary compliance to the policy frameworks and legal provisions.

#### **3.4.2 Water resources**

- Water resources assessment across related sectors and at both local and Basin level. Comprehensive collection and assembly of information is needed on the quantity, quality, character, location and patterns of use, and response of the resource to use and user demands, pollution and water quality degradation processes;
- Integrated water resources planning, development and management;



- Provision of adequate, clean and safe water within easy reach;
- Encouraging and empowerment of the private sector, local institutions, and communities in the management of water resources.

### **3.4.3 Fisheries resources**

- Attained proper management of fish stocks for sustainable utilization;
- Provision of technical assistance and credit facilities to artisanal/fish folks;
- Encouraging gender equity in fisheries development;
- Encourage private sector to invest more in quality control and safety assurance to maintain fish quality;
- Encourage and assist fishers to establish fisher's cooperative society;
- Promotion of small-scale fish farming development;
- Strengthen collaborative fisheries management for sustainable management of fishery resources;
- Public sensitization about sustainable fishery resources management of Lake Victoria and its basin;
- Provide training to fishermen, processors and traders on improved fish handling and processing methods and techniques;
- Strengthen fisheries data collection and dissemination; and
- Strengthen fisheries research development for sustainable management of fishery resources.

### **3.4.4 Agriculture**

- Increased agricultural productivity; and
- Integrated pest management.

### **3.4.5 Livestock**

- Increased livestock productivity; and
- Integrated vector management.

### **3.4.6 Forestry**

- Strengthen Joint Forest Management systems with local communities; and
- Increase awareness among the general public on the importance of proper forestry management.

### **3.4.7 Wildlife**

- Sustainable utilization and income generation from wildlife resources;
- To promote involvement of the village communities in planning, monitoring and coordination of wildlife resources; and
- Set benefits sharing system between governments, both central and local communities surrounding the game reserves.





#### **3.4.8 Mineral resources**

- Increased mineral output by small-scale miners with environmentally sound technologies;
- Public awareness program for promoting environmentally sound mining;
- Regularize and improve small-scale mining for sustainable development; and
- Empower and facilitate small-scale miners (financially, technologically and markets).

#### **3.4.9 Energy**

- Development of alternative sources of energy; and
- Promote the use of alternative sources of energy.

#### **3.4.10 Land resources**

- Establishing a strong linkage between water, land and environment with a view to coordinating policies that support and complement one another and facilitate the social and economic development while maintaining ecological balance of the environment.

#### **3.4.11 Cross-cutting all sectors**

- Prevention and control of land degradation, water and air pollution;
- Harmonization of the environmental legislation, regulations, and by-laws;
- Improving support services (roads, communication, extension, health services, and education);
- Sustainable management of aquatic weeds; and
- Promoting the access of women and youth to land resources.

### **3.5 Vision for the Policy Area**

“Prosperous livelihoods, and enhanced management of ecosystem and natural resources in Lake Victoria Basin.”

This vision encompasses the following guiding statements:

#### **3.5.1 Water quality management and pollution control**

- A restored Lake Victoria Basin ecosystem with clean water that is able to support various uses for sustainable socioeconomic development.

#### **3.5.2 Water resources**

- Sustainable water resources management by ensuring effective and efficient water resources utilization.



### **3.5.3 Fisheries resources**

- Sustainable, integrated fisheries resources management for optimal utilization of the resources and socio-economic benefits of the present and future generations.

### **3.5.4 Agriculture**

- Sustainable use of resources to increase agricultural productivity.

### **3.5.5 Livestock**

- Sustainable development and use of resources to increase livestock productivity.

### **3.5.6 Forestry**

- Improved vegetation cover, reduced pressure on the forests and give chance to the indigenous trees to regenerate.

### **3.5.7 Fisheries**

- Sustainable, integrated fisheries resources management for optimal utilization of the fisheries resources and the socio-economic benefits of the present and future generations.

### **3.5.8 Wildlife**

- Sustainable utilization of the wildlife resources.

### **3.5.9 Mineral resources**

- Increased mineral output with emphasis on environmental protection and conservation.

### **3.5.10 Energy**

- Diversified use of energy sources.

### **3.5.11 Land Resources**

- Sustainable utilization and development of land resources

### **3.5.12 Cross-cutting all sectors**

- Clean and healthy environment.

## **3.6 Strategies**

Given the on going degradation of the integrity of ecosystem in the Lake Basin, strategic actions must be employed to reduce the magnitude of the degradation from reaching impacts which might be of catastrophic magnitude. The following strategies for implementation are recommended:

### **3.6.1 Water Quality Management and Pollution Control**

- Ensure in-lake water quality monitoring;



- Strengthening industrial and Municipal waste management; and
- Inhibiting (including monitoring and control) pollution loading.

### **3.6.2 Water resources**

- Formulating and implementing policies on integrated, coordinated and sustainable water resource management at both national and regional level through application of the principles of comprehensiveness, subsidiary, economic, awareness, education and consensus building.
- Promoting environmentally sound technologies for efficient and safe water use;
- Creating a conducive environment for the private sector participation in water resource management;
- Establishing solid waste recycling plants and support participation of communities at household level;
- Strengthening capacity for urban planning and development;
- Establishing proper waste disposal solid waste disposal sites;
- Strengthening institutional capacity in waste management;
- Creating public awareness on safe management of wastes; and
- Instituting voluntary compliance mechanisms.

### **3.6.3 Fisheries resources**

- Providing extension services and effective credit systems for artisanal/fish folks;
- Supporting women activities and participation in the fishing industry; and
- Strengthening enforcement of regulations prohibiting use of inappropriate fishing methods.

### **3.6.4 Agriculture**

- Reducing dependency on rain fed agriculture;
- Promoting accessibility to credit facilities/soft loans to smallholder farmers; and improve market systems;
- Promoting agro processing industries; and
- Promoting commercial farming.

### **3.6.5 Livestock**

- Providing essential services (reliable and water supply, extension services, veterinary services, reliable markets, etc), credit facilities/soft loans;
- Creating awareness on all aspects of good animal husbandry;
- Providing cattle dipping; and
- Providing infrastructure especially reliable markets.



### **3.6.6 Forestry**

- Reducing use of woodfuel as source of energy and maintain it at manageable and sustainable levels;
- Creating awareness of local communities on importance of participatory forestry management;
- Harmonizing cross-sectoral policies/strategies and legislations related to forestry; and
- Establishing community owned forest projects, and encourage communities to establish nurseries and woodlots; and
- Strengthening joint forest management system with local communities and increase awareness on the importance of forest management.

### **3.6.7 Wildlife**

- Create enabling environment for private sector investment in wildlife utilization and conservation;
- Encourage women involvement in wildlife related activities; and
- Transfer the management of wildlife management areas (WMA) to local communities to ensure local communities benefits from wildlife conservation.

### **3.6.8 Mineral resources**

- Training artisanal miners on environmentally sound technologies; and
- Creating public awareness on environmental conservation.

### **3.6.9 Energy**

- Searching and using appropriate alternative sources of energy to fuelwood.

### **3.6.10 Cross-cutting all sectors**

- Improving extension services and education;
- Harmonizing the relevant policies towards supporting environmental management;
- Harmonizing laws and policies;
- Developing enforceable and stringent bylaws;
- Strengthening enforcement of laws;
- Establishing sustainable mechanism for participation of communities in environmental management;
- Conducting specialized training of actors at various level; and
- Improving knowledge on environmental education in schools.



## Chapter 4

### **Policy Area 2 Production and Income Generation**



## **4.0 PRODUCTION AND INCOME GENERATION**

### **4.1 Introduction**

Sustainable development implies meeting the basic needs of the people without harming the ecosystem or depleting natural resources crucial for the livelihoods of future generation. Economic activities based on the rich natural resources of the Lake Basin have, in one way or the other, effects on the ecosystem of the Basin and, subsequently, on the lake itself. There are very close links between production and income generating activities (agriculture, livestock, fisheries, mining, forestry, wildlife, tourism, etc.), population growth, and quality of life and ecosystem health. This implies that economic growth must be pro-poor and pro-environment. A sustainable “healthy” development of Lake Victoria Basin implies putting in place social policies, resource management systems and governance of institutions that coherently link these dimensions of development. This chapter briefly provides the basis for vision building prioritizes the issues and recommends appropriate strategies for implementation with respect to production and income generation.

### **4.2 Background Information**

#### **4.2.1 Agriculture and livestock**

(i) **Agriculture**

Agriculture is the leading sector in the economy and contributes about 45 percent of the GDP and around 55 percent of country’s foreign exchange earning. The sector employs 80 percent of the main labor force. The main produce from the agricultural sector includes food crops, livestock and traditional export crops. It has strong linkages with non-farm sector through agro-processing, urban markets and export trade. Trends in income generation and poverty reduction are highly dependent on the growth of agriculture and related rural non-agricultural activities. There are several farming systems in the Lake Victoria Basin influenced by agro-ecological zones determined by rainfall, temperature, geology, landscape and population density.

(ii) **Livestock**

The livestock sector is an integral part of the Tanzania’s economy. The sub-sector as a whole contributes about 30 percent to the agricultural GDP. Livestock contributes a large share to the Lake Victoria Basin’s sources of livelihoods. In Tanzania, the Basin area is estimated to have a total of 4 million livestock (60.7 livestock per square kilometer). Indigenous breeds characterizes livestock production in the Basin where only about 28 thousands of cattle are improved or exotic breeds. Farmers are





reluctant to adopt improved breeds for fear of losses due to the limited feeds and veterinary services.

#### **4.2.2 Fisheries Resource**

The fisheries sector has a lot of economic and social significance to the country. It contributes around 4 percent of the National GDP and currently about 28 percent of the foreign exchange earnings. Fish production in Lake Victoria comprises about 50 percent of Tanzania's total production volume. It is estimated that there are about 74,000 full time fishermen and more than 200,000 people employed in fisheries related activities in the Tanzanian part of the Lake Basin. These activities include fish processing, marketing, distribution, net making, boat building, marine engine repair, and production of other accessories used in the fishery. To the majority of these people and the lakeshore population at large, it is fish's utility as an inexpensive source of high quality food and contribution to income generation and poverty eradication that make the fishery resource so valuable. Per capita annual fish consumption volume in Mara and Mwanza regions are 45.3 kg and 36.8 kg, respectively, much higher than the national average of 12 kg. Awareness on the need to conserve and properly manage the Lake's fisheries resources is particularly important now because natural fish stocks are being severely depleted and many forms of aquaculture have yet to prove their sustainability and be accessible to the rural poor.

#### **4.2.3 Forest Resource**

Tanzania has about 38 million hectares of forest and woodlands, covering 40 percent of the total land area. It is estimated that the forestry sector contributes between 2.3 and 10 percent of the country's registered export. There are about 52 forest reserves around the Lake Victoria Basin. In Kagera region, natural forest covers 51.5 percent of the region while in Mwanza natural forest covers 0.68 percent. Mara region has 1,550,900 ha of natural forest. In addition to their ecological and environmental functions a large proportion of rural population depends on forest resources for basic needs for firewood and other forest products providing income, food security, and shelter. However, unsustainable forest utilization has contributed significantly to the alteration of the natural vegetation cover in the Lake Basin.

#### **4.2.4 Water Resource**

Water is a strategic resource for socio-economic development of Tanzania, and will remain so for achieving the Vision for the Lake Victoria Basin. But the demands for water and economic prosperity that is envisaged will be driven by economic growth, increase in population and improvement in quality of life of the people.



The economic prosperity of the Lake Victoria Basin support and generate wealth for more investment in public and private sector will, by and large, be driven by water through primary production in agriculture, mining, livestock, energy, fishery, industry, wildlife and tourism, forestry and by national, regional and global trade in water driven products. However, there are a number of present-day water resources management challenges that face Lake Victoria Basin which need to be addressed if tangible achievements of the Vision are to be realized.

#### **4.2.5 Wildlife**

The wildlife of Tanzania is a unique natural heritage and resource that is of great importance both nationally and globally. It's importance lies both in the biological value of the species and habitats found in Tanzania; the economic value of the resources and it's potential to contribute to the sustainable development of Tanzania. The Lake regions (Mwanza, Kagera and Mara) possess a distinct and substantial wildlife potential. The big proportion of the Serengeti National Park is in Mara Region and it covers an area of 14,763 km<sup>2</sup>. There is also Rubondo National Park in Mwanza Region. The Basin is also endowed with several game reserves. Wildlife is faced by a problem of frequent invasion by people for hunting, farming and human settlement. Throughout the Lake Victoria Basin, wildlife numbers and diversity are declining in the face of increasing population, decreasing government budgets, competition for funding and rapidly rising human pressure for land, food, pastures and income.

#### **4.2.6 Tourism**

Tourism is among the sectors with great economic growth potential. In 1997, tourism contributed 15.8 percent of the country GDP and 54 percent of the country export earning. It also provides employment for 30,000 people. In the Lake Victoria Basin, tourism is underdeveloped despite the fact that the area has a variety of sites ideal for tourism attraction. These include the lake itself and its attractive resorts and beaches, the surrounding parks and reserves and the diverse culture of various groups of inhabitants.

#### **4.2.7 Mining Resource**

Tanzania is endowed with a number of minerals including Gold, Diamond, Mica, Tanzanite, Ruby and other gemstones. Mining sector currently contribute about 13.9 percent of GDP. Mining exploration and prospecting in the Lake Basin area is undertaken by the local population, as well as by national and international mining sectors. The mineral availability in Kagera and Mara regions is too small for large-scale exploitation, whilst in Mwanza, particularly Geita District gold mining has been commercially important since 1950s. Prior to 1990s, mainly small-scale miners (estimated to number in excess of 300,000) were undertaking mining activities and the contribution of mining sector to GDP was very low. With



the influx of industrial mining companies, the government earning in terms of taxation/royalties from mining has increased but the employment and earning of small-scale miners had drastically declined.

#### **4.2.8 Land Use**

The land in Lake Victoria Basin is suitable for various uses including agriculture, forest development, livestock development, mineral exploitation, water resources development, energy harnessing, and tourism. Currently, land use development within the basin is haphazardly carried out calling for mitigating measures through land use planning.

### **4.3 Current Status: Problems and Challenges**

Poor infrastructure, inadequate markets and decline in the use of improved farm input packages particularly improved seeds, and agro-chemicals (fertilizers and pesticides) have led to low agricultural productivity. The low agricultural productivity coupled with the collapse of cooperative union has affected farmers bargaining power, crop prices and rural income. Development of the livestock sector is constrained by poor breed, inadequate grazing pastures, drought and expensive veterinary services. With less than 1500 mm of annual rainfall for a large part of Basin, most animals are starving and are forced to move from one area to another looking for water. These unplanned livestock movements cause diseases to spread, rangeland retrogression, environmental damage and social problems. The fishery transformation associated with the development of a lucrative fish export business has had its share of negative impacts. These include an ecological upheaval, loss of control by the local community over most aspects of the fishing enterprise and displacement of people who were formerly employed in traditional fish processing and marketing sectors. This has led to skewed distribution of income and increasing food insecurity in the lake region and the entire country as fish has gradually become unaffordable and unavailable. Since water is a strategic resource for socio-economic development in the Basin, high variability of rainfall and inadequate access to water supply have been recognized to affect many production and income generating activities in the Basin. On the other hand, deteriorating lake water quality is contributing directly to the upsurge of nuisance floating weeds, loss of fish habitats and diversity, and reduced ability of water to support other uses. Parallel with the ongoing artisan mining activities is the extensive environmental degradation caused by inefficient mining and the poor processing technologies currently being employed. Other problems in this policy area include uncoordinated land uses, inadequate financial and human resources for facilitation of activities in many sectors including tourism, inadequate wildlife user rights, wildlife poaching, and limited private sector participation in sectoral production and income generating activities.



#### **4.4 Priorities**

Production and income generation activities are vital for the sustainable development and improving the life standard of the people. Indicatively, the prioritization of production and income generating activities that can enable people in the Lake Victoria Basin to improve their standards of living include agriculture, fisheries, and mining. However, there are key priority issues that cut across the 8 sectors considered in Policy Area 2. These include the following:-

- Strengthening market efficiency for inputs and outputs in all sectors;
- Facilitating investment and financing in all sectors (e.g. development of the sector specific incentive package);
- Increase productivity in all sectors;
- Incorporate gender perspective in the development of the sectors;
- Enhance private sector and communities participation in planning and management;
- Strengthening the capacity building of local communities and local governments to administer and manage resources; including land use planning.
- Developing an enabling legal, regulatory institutional environment for rural communities and private sector in resource utilization and management;
- Improve key infrastructure for all sectors including transport, road network, communication, and information technology; and
- Improvement of social infrastructures in all sector areas (occupational health, labor conditions and micro-credits, etc.).

#### **4.5 Vision for the Policy Area**

“Resources sustainably used and managed and productivity promoted with increased income levels of communities in the Lake basin.”

This vision encompasses the following: -

Production and income generation cuts across agriculture and livestock, forestry, fisheries, water, wildlife, tourism and mining sectors. The following guiding statements have been developed from these sectors:

##### **4.5.1 Water resources**

- Sustainable use and management of water resources; and
- Adequate, clean and safe water at shorter distance for rural and urban inhabitants.



#### **4.5.2 Fisheries resources**

- Attained conserved fish stocks for sustainable yield and improved marketing channels.

#### **4.5.3 Agriculture and livestock**

- Increased agriculture and livestock productivity; and
- Accessible extension services to smallholder farmers and livestock keepers.

#### **4.5.4 Forestry**

- Sustainable use and conservation of forestry resources.

#### **4.5.5 Wildlife**

- Sustainable utilization of wildlife resources and increased household income; and Sustainable eco-tourism.

#### **4.5.6 Mineral resources**

- Enhanced participation and promote investment in mining sector; and
- Increased mineral output with adequate environment protection.

#### **4.5.7 Land use**

- Prudent and suitable land use to conserve land resources for the purpose of alleviating poverty and minimizing environmental problems afflicting populace.

#### **4.5.8 Interventions cross-cutting all sectors**

- Sustainable use of resources to increase productivity and household income.

### **4.6 Strategies**

In order to achieve sustainable production and income, the following strategies (which cut across all sectors) should be instituted:

- Facilitating public and private sectors roles in improving support services;
- Improving marketing infrastructure in all sectors;
- Improving rural infrastructure (roads, water supply, dips and transportation);
- Mainstreaming gender participation in planning and management of natural resources;
- Ensuring improved quality of produce and services;
- Encouraging equity at all levels of sector development;
- Establishing legal framework for the promotion of private and community based ownership;



- Promote the involvement of private sector and communities in developing goods and services;
- Enhance training to communities to acquire skills in operation and maintenance and management of resources;
- Promote and encourage participation of the private sector and communities to initiate, own, develop and management of resources;
- Allocating adequate public funds to enable the effective promotion and development of production sectors;
- Encourage financial institutions to support individuals, communities and private sector by formulating affordable credit schemes; and
- Promoting partnership between local and large-scale investors to facilitate technology transfer and optimize use of resources.





## Chapter 5

### **Policy Area 3 Living Condition and Quality of Life**



## **5.0 LIVING CONDITION AND QUALITY OF LIFE**

### **5.1 Introduction**

The Lake Victoria Basin resource potential is immense and has not been fully utilized to its full potential in order to improve the quality of life in the region. Lake Victoria occupies a total of 68,000 kilometers squares out of this Tanzania occupies 51%, Uganda 43% and Kenya only 6%. This chapter paints a picture of what the region can offer so as to improve the living condition and quality of life. The chapter also presents the basis for prioritization of areas, develops a vision and recommends specific strategies for implementation.

### **5.2 Background Information**

#### **5.2.1 Infrastructure**

- (i) Road transport:  
Among the transport infrastructure, roads transport is the dominant mode of transport in Lake Basin accounting for an 80% of all land transport. Most of the rural roads in the Lake Victoria Basin are unpaved and the majority of which are in poor state making it difficult to access social services and productive areas all year round. Among others is the ad-hoc maintenance and spot improvements, vehicle overloading causes considerable damage to the roads. Rural production and marketing systems are badly hit. Stakeholders of the Lake Victoria Basin site the improvement of road network infrastructure as the precondition for the investment, trade, social and economic development in general.
- (ii) Water transport:  
Along the Lakeshores, water transport is the main transport mode with number of private boats and public ships serving in major towns and between urban centres and the small islands, though in limited capacity. Efforts to regulate and harmonize the inland water transport in Lake Victoria shall be operationalized through the signed Inland Water Supply Agreement by the riparian states.
- (iii) Railway transport:  
Railway system is still underdeveloped in Tanzania, and more so in the Lake Victoria Basin. The existing central railway line provides its services (cargo and passenger) to some parts of Mwanza and Shinyanga regions. However, due to the lack of investment of maintenance and rehabilitation and poor management it is far from satisfactory to serve for this purpose.
- (iv) Air transport:



Mwanza international airport, and Bukoba and Musoma regional airports serve people in the basin. All existing airports in the Lake Basin need improvements to operate to the satisfactory level.

- (v) Telecommunication and information systems:  
In the Basin, telecommunication and information services have registered growth over the years, i.e. public call boxes, mobile phones, post services, etc. However, the concentration is higher in urban centers leaving rural remote areas with limited access. Despite the under developed Geographical Information Systems (GIS), the Country have a potential to provide necessary information for assessment of resources and planning through remote sensing applications.
- (vi) Water supply and sewage:  
Surface and underground water sources are the main sources of water in the Lake Victoria Basin. Unfortunately, most of the surface water sources are heavily polluted. Water schemes for the provision of safe and clean water for consumption are limited to urban areas. Protected point sources, i.e. boreholes, spring are easily contaminated and some dry up during the dry season. A treatment system of sewers and sewage is generally bad.

Rural areas, some of the peri-urban and urban areas rely heavily on pit latrine for human waste disposal. However, the coverage is low, in most parts of the Lake Basin no more than 40% coverage is recorded.

### **5.2.2 Education and Training**

Education is a precursor to improvement in quality of life and sustainable development. It has a bearing on awareness levels, access to information, with positive impacts on health, production, conservation and general well being of the population. It addresses ignorance, lack of awareness and the sense of disempowerment, which affects effective participation of people in development process, particularly in addressing poverty.

### **5.2.3 Employment**

In the Lake Victoria Basin, urban centers provide employment opportunities in the formal sectors of economy, and offers attractive options in the informal sector and self-employment. In urban centers commerce, industry and services generate small employment opportunities to the households in the Lake Victoria Basin as compared to the economic activities on the natural resources. For example, agriculture employs about 80 percent of the productive labor force in Mara, 85 percent in Mwanza and 90 percent in Kagera regions. On the other hand, urban centers attract job seekers from other areas leading to an influx of people and increasing demand for infrastructure.



#### **5.2.4 Poverty**

In Tanzania different policy initiatives have been initiated to reduce poverty and other development challenges. Vision 2025 for Tanzania lay out a foundation for the long-term development goals against which A National Poverty Eradication Strategy has been formulated. In these same lines, the Poverty Reduction Strategy Papers (PSRP) focuses on poverty reduction. It is centered on micro-economic stability; export growth, development of the rural and private sector.

Tanzania Assistance Strategy (TAS) has been adopted as a result of a mutually felt need between the Government of Tanzania and its international development partners form the comprehensive medium term development agenda. Against TAS, development support and activities is regularly been assessed and addressed.

Despite the continued efforts and commitment to address poverty situation in the country from 1980s, poverty remains deep and pervasive in both rural and urban areas.

#### **5.2.5 Health and Social Services**

Most of the health problems in Tanzania can be attributed to communicable diseases. Major diseases, which contribute to deaths include malaria, tuberculosis (TB), pneumonia, maternal health problems and HIV/AIDS related diseases. The country embarked on health sector reform with the intention of revisiting strategies to improve quality of health services and increase accessibility and utilization of these services by people on equitable basis.

### **5.3 Current Status: Problems and Challenges**

Living conditions and poor quality of life are mainly determined by agriculture, health and social services and education sectors. In agriculture and livestock sectors the main problems and challenges are low agricultural and livestock productivity; poor state of infrastructure (roads network and telecommunication), unemployment, environment degradation, and wide spread income poverty. Adverse effects and impact of HIV/AIDS, deteriorating access to quality health services, inadequate budgeting allocations to primary health care and population growth and rural-urban migration are major problems and challenges in health and social services areas. In education sector, major problems include inadequate facilities for schools (classrooms, teaching material and houses for teachers), poor quality and less relevant curricula at the primary and post primary levels and inadequate involvement of communities in the education planning process. There is a challenge to transform sub sectors into wealthy creating improve living condition and engine high quality of life industry.



## **5.4 Priorities**

In order to improve the living conditions and quality of life of the people, there is a need to balance human activities and nature conservation. Therefore, the following are the priority areas for future development in sustainable development:

### **5.4.1 Infrastructure**

- Improve district and feeder roads;
- Improve water transport and harbors;
- Expand and upgrade telecommunication services through privatization; and
- Promote and improve facilities of airports.
- Facilitate the development of GIS
- Improve water supply and drainage systems

### **5.4.2 Education and training**

- Motivate and mobilize private investment in education;
- Re-orienting education towards self-employment;
- Promote vocational training institutions for skills development;
- Increase access to education, by focusing on the equity issue with respect to women and disadvantaged groups; and
- Streamline of the management structure of education by placing more authority and responsibility on schools, local communities, districts and regions.

### **5.4.3 Employment**

- Build the capacity of communities and individuals to engage effectively in economic activities
- Promote and facilitate income generation efforts of the households
- Facilitate private sector participants with particular focus on local initiatives
- Promote the implementation of poverty reduction and development initiatives

### **5.4.4 Poverty**

- Increase economic growth through increased investment in the production sectors;
- Diversify structure of the economy and enhance agro-industry development.
- Decrease income poverty
- Decrease food poverty.
- Addressing poverty; environmental linkages.
- Address poverty; HIV/AIDS pandemic.
- Reduce vulnerability.



#### **5.4.5 Health and social services**

- Strengthen campaign and capacity building on HIV/AIDS to communities to combat the pandemic;
- Reduce mortality rates for enhanced survival;
- Ensure adequate supply of essential drugs and other hospital supplies; and
- Promote opportunities for private sector to provide health care services.

#### **5.5 Vision for the Policy Area**

“A well educated society with high quality of life, well developed infrastructure and free from poverty”

##### **Guiding Statements**

The following guiding statements to the vision for infrastructure, poverty, health and social services and education:

##### **5.5.1 Infrastructure**

- Improve road networks, lake water transport and other infrastructures in order to be safe, reliable for all.

##### **5.5.2 Education and training**

- Enrolment for all and improved quality of education.

##### **5.5.3 Employment**

- Build the local capacity to effectively responding on development challenges, and access to credit and financial services

##### **5.5.4 Poverty**

- Attain poverty free society with better standard of life and improved household economy.

##### **5.5.5 Health and social services**

- Improve quality and access of health and social services.

#### **5.6 Strategies**

In order to improve living conditions and quality of life of the people the following strategies are crucial:

##### **5.6.1 Infrastructure**

- Attracting investors in lake water transport and transportation;
- Establishment of rural electrification programs;
- Developing irrigation schemes; and





- Promoting private investment both in lake water and road transportation networks.

#### **5.6.2 Education and training**

- Encouraging the private sector and individuals to invest in education development;
- Increasing annual intakes of students joining higher learning institutions;
- Rehabilitating and constructing schools including houses for teachers;
- Strengthening capacity building programs for teachers;
- Promoting and reviving adult education programs; and
- Strengthening school committee and inspection.

#### **5.6.3 Employment**

- Creating an enabling environment for the private sector participation
- Building the local capacity to effectively responding on development challenges
- Facilitating the availability and access to credit and financial services
- Creating and strengthening credit provision in both rural and urban areas.

#### **5.6.4 Poverty**

- Improving productivity, profitability and commercialization of agriculture and livestock;
- Improving services for agriculture and livestock products; and
- Promoting agro-processing industries in the rural areas and encourage increased investment in smallholder irrigation systems and improving marketing services for agricultural products.

#### **5.6.5 Health and social services**

- Expanding and strengthening health programs targeted to the needy, such as HIV / AIDS, malaria and Tuberculosis victims;
- Strengthening institutional capacity to implement health sector program, particularly health care;
- Building capacity of health service providers in rural and urban areas; and
- Increasing the number of health centers, facilities and trained staff in rural areas.



## Chapter 6

### **Policy Area 4 Population and Demography**



## **6.0 POPULATION AND DEMOGRAPHY**

### **6.1 Introduction**

Development processes are significantly influenced by population characteristics, which in turn have a major impact on the attainment of overall development objectives. Often, population dynamics and the level of development have implications on resource use and subsequently quality of life. In a situation of rapidly growing population, the need to have a demographically “healthy” population that is able to meet future challenges in production, community development and competence, institutional capacity and good governance is crucial. In Tanzania, Lake Victoria Basin comprises about four regions namely Mwanza, Mara, Kagera and Shinyanga. Like the preceding chapters, this chapter briefly provides the basis for vision building, builds the visions, prioritizes the issues and recommends appropriate strategies with regards to population and demography.

### **6.2 Background Information**

The process of development is significantly influenced by population trends and population factors, which in turn have a major impact on the attainment of overall development objectives.

At present, the lake regions are among the populous regions in Tanzania. National Population Census 2002 estimated that Tanzania has about 34 million people. The Mwanza region has the highest population of 2.9 million people, Kagera region about 2.0 million, Mara region about 1.4 million and part of Shinyanga about 600,000 population. The basin has about 6.9 million people in Tanzania side. The population growth rate is estimated as high as 2.6 % per annum.

It is estimated that the economically active population (age group 15-64 years) in the three lake regions and part of Shinyanga constitute 48% of the total population with more than half of the labor force being female. The majority of these people are engaged in subsistence agriculture, livestock keeping, mining activities and others are engaged in fishing industry.

### **6.3 Current Status: Problems and Challenges**

High population growth through fertility, migration and influx of refugees has been an issue impacting service delivery and resource conservation. In recent years, HIV/AIDS has had a devastating impact on the residents of the lake basin. It has led to increase in the number of orphaned households; poverty levels and accompanying school drop out rate and



food insecurity. Increase in the rate of unemployment has aggravated the economic situation of most of the people in the basin.

#### **6.4 Priorities**

In order to improve the quality of the life and to avert the current problems in the lake, the following will be the priorities for intervention:

- Sensitize the public on the interaction between population growth, natural resources utilization and development;
- Improve health infrastructure, personnel, facilities and equipment;
- Counteract and control HIV/AIDS spread;
- Attain life expectancy of 60 years;
- Create conducive environment for development of human settlement through appropriate land use practice;
- Ensure that land use conflicts in rural areas are resolved through and land use plans prepared;
- Reduce infant and child mortality rates and maternal mortality; and
- Reduce total fertility rate.

#### **6.5 Vision for the Policy Area**

“A Lake Victoria Basin experiences improved quality of life of local communities through sustainable use of basin resources while ensuring that economic growth rate is above population growth rate.”

#### **6.6 Strategies**

Strategies to achieve harmonization of population trends with development will include, among others, the following:

- Integrating population issues in development planning reflecting realistic needs;
- Evaluating the current use of available natural resources with the aim of establishing an appropriate system of distributing resources among the users;
- Creating awareness to the public on the link between population, resources, environment, poverty eradication and sustainable development;
- Improving and sustaining the health and well being of mothers and children;
- Demarcating and allocating land areas for investment (e.g. industries, agriculture, rangelands and tourist areas);
- Resolving land use conflicts and environmental problems through land use planning procedure according to the legislation;
- Encouraging the private sector and local communities to be actively involved in initiating, implementing and financing population programs;



- Improving productivity of small-scale farmers/fishermen and industries and promoting non-agricultural production in rural areas;
- Establishing preparedness plan for handling refugees; and
- Addressing policy elements that encourage investments in the rural sector and which provide employment opportunities for the rural population.



## Chapter 7

### **Policy Area 5 Governance, Institutions and Policies**





## **7.0 GOVERNANCE, INSTITUTIONS AND POLICIES**

### **7.1 Introduction**

Institutional frameworks affecting the Lake Basin ecosystem span multiple scales and dimensions. Institutions are directly involved in shaping the driving forces, managing, policy formulation and coordination of human impacts in the entire basin. This chapter, therefore, provides a general framework for conceptualizing of institutional issues related to resource management and other human nature interactions with a view to forming a basis for prioritization, vision building and strategy formulation.

### **7.2 Background Information**

The role of good governance in promoting transparency, accountability, participation, socio-economic growth and reduced poverty cannot be overemphasized. Cognizant to this fact, the Tanzania Development Vision (2025), emphasizes the role of good governance in the national socio-economic structure to ensure a cultural accountability, rewarding good performance, eradication of gender imbalances and effectively curbing corruption and other vices in society. In the same line, the Local Government Reform Programme (1997) is not only empowering people from grass-roots level, but also ensuring law harmonization across the scale as the responsibility for most public service provision is to be transferred from central to local government. Besides, the government efforts include formulation of the National Framework on Good Governance (2000) and formation of a special ministry dedicated to good governance and establishment of governance institutions, such as Prevention Corruption Bureau (PCB), to curb corruption.

### **7.3 Current Status: Problems and Challenges**

Limited administrative capacity especially on integrating development activities, curbing growing insecurity particularly in Ukerewe, Ngara and Biharamuro districts due to civil wars in neighboring countries, and difficulties to access to information especially on legal matters have been identified as some of the threats for achieving good governance. In addition, financial constraints, corruption, low accountability, lack of transparency and an inadequate stakeholders' participation by both Central and Local Governments pose a major challenge to attaining good governance. This situation has been further suppressed by ignorance of human rights or lack of appreciation of such institutions, policies and rights in the society by most of the law enforcement authorities and the civil community at large. The challenges in



governance and operations of institutions provide some indications for vital policy areas in poverty reduction as well as increasing public awareness and participation in general.

#### **7.4 Priorities**

The stakeholders identified the following priorities to facilitate the realization of good governance at all levels:

- Impart civic education to the public on their rights and responsibilities;
- Ensure participatory planning in local government authorities with respect to the involvement of people in social, political and economic decision making;
- Create an environment that encourages people to form, join, and engage in civil society organizations voluntarily in pursuit of their development and service delivery needs; and
- Ensure gender mainstreaming in all activities.

#### **7.5 Vision**

“A prosperous community that observes the rule of law that is well integrated with institutional framework and supported by an enabling policy environment developed from the grassroots.”

#### **7.6 Strategies**

Strategies to achieve good governance at all levels will include, among others, the following:

- Strengthening the capacity of the local governments and judicial instruments to have integrated implementation of projects and to lawfully ensure the security of the persons and property as well as respect for human rights;
- Responding and meeting the needs of special groups of women, children and youth in order to reduce their work load.
- Strengthening household income generating projects and enable them to participate in decision making and ownership of household property.
- Strengthening the capacity of the judiciary to administer law and justice with fairness and efficiency both at local and central Government level and to protect human rights;
- Strengthening the local Government institutions to provide the people with opportunities for influencing their own development;
- Promoting and improving civil society organizations’ effective participation in decision making and social, political and economic development activities;
- Recognizing and implementing international obligations on human right instruments;



- Investigating violation of human rights and appropriate remedial action taken;
- Educating the public on the constitutional and human rights as well as supporting and strengthening human rights organizations to promote human rights and to raise awareness among the members of the general public;
- Promoting active participation of women in socio-political activities, particularly at grassroots level;
- Strengthening procedures and regulations which ensure transparency in the conduct of official affairs through adherence to requirement of open and transparent reporting of administrative decisions;
- Establishing and strengthening appropriate anti-corruption measures; and
- Awareness raising campaigns on local resources ownership and control.



## Chapter 8

### **Policy Area 6 Gender**



## **8.0 GENDER**

### **8.1 Introduction**

Sustainable development requires maximum and equitable participation of all gender categories in all spheres of development and also in sharing the benefits thereof. Gender, as a crosscutting issue, is one of the key bases of marginalization and exclusion. In addition, gender is a critical area of concern in formulating policy geared to efficiently harness the socio-economic potentials in Lake Victoria Basin. This chapter provides a general framework for conceptualizing gender with a view of forming a basis for prioritization, vision building and strategy formulation.

### **8.2 Background Information**

The population of the Tanzania part of the Lake Basin Regions of Mwanza, Kagera, Mara and Shinyanga is estimated at about 6.9 million<sup>1</sup> with an annual growth rate of 2.6%. The male/female ratio is 49% male against 51%female. While primary school enrolment shows no significant difference since 1985, the secondary school enrolment shows that boys outnumbered girls both in public and private schools. About 85% of the total population of the Tanzania's Lake Basin lives in rural areas of which 70% are female, full time smallholder farmers. The number of women in non-farm activities is likely to increase in future given the declining incentives in agriculture due to low prices, lack of inputs and lack of market access. In the mining sector women are involved both as firms and as licensed individual owner operators. The Tanzania Women Miners Association (TAWOMA), which was formed and registered in 1997, has provided a collaborative framework for individual and group networking and advocacy. Nevertheless, women involvement in mining industry is very low. Women are networked to soft loans and other credit facilities and a considerable number of women's groups for income generation groups are registered in the Basin area.

Among the objectives of the Tanzania's Community Development policy is to recognize and emphasize that the family/household as the basis of community development and to ensure that the people participate fully in formulating, planning, implementing and evaluating development plans.

Tanzania ratified the "UN Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1985. The CEDAW (The International Bill of rights for women) commits governments to take measures at national as well as international level. The government of Tanzania adopted the Women in Development (WID) in 1992 and later

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<sup>1</sup> Data from 2002 population census



replaced by the Women and Gender Development Policy in 2000. The policy is aiming at guiding all sectors to adopt gender as a development issue. Deliberate efforts will be directed to accelerate gender equality through gender mainstreaming and in ensuring that both men and women are involved in all development processes. Besides policy formulation the government efforts has included enactment by law such as the Sexual Offences Special Provisions Act of 1998.

The Fourth World Conference for Women (1995) came up with a powerful agenda for the empowerment of women. The agenda calls for the integration of gender perspective in all policies and programs. It focuses on concrete measures to address the twelve critical areas of concern (one of them is the representation of women in politics and decision-making). The Government of the United Republic of Tanzania is a signatory to this declaration that identified the following four areas of national priority out of the twelve critical areas of concern:

- Empowerment of women in decision-making and politics;
- Economic empowerment and poverty eradication;
- Access to education, training and empowerment; and
- Enhancement of Women's Legal Capacity.

### **8.3 Current Status: Problems and Challenges**

The Tanzania Community Development Policy (1996) expectations are to build a self-reliant community with sufficient income to lead a good life and have a self-reliant nation. In order to realize the above expectations, strengthening of families/households through provision of training, knowledge and skills, civic education and democracy is essential. Responding to and meeting the needs of special groups of women, children and youth in order to reduce their workload; strengthen family income generating projects and enable them to participate in decisions and ownership of family property is among the areas of emphasis of the Community Development Policy.

However, gender has played a key role as a base for marginalization and exclusion of specific groups to take part in development and enjoying benefits accruing from it. Gender marginalization and exclusion in Tanzania has been persistent regardless of enabling laws and regulations due to Cultural/religious attitudes and practices. The Tanzania Land Act of 1999 and the Village Land Act of 1999 enable women to enjoy equal rights with men in ownership of land, some traditional or cultural practices still deny women from owning land. The Land Act 1999, enable women to inherit land from the deceased husbands. However, the law recognizes religious as well as customary laws regarding inheritance. The laws are not harmonized thus giving a loophole for denying rights of women to



inherit from the deceased husbands regardless their full participation in accumulating that wealth.

Education being a major tool for human liberation and empowerment is yet to address fully gender issues. Access to secondary education and higher learning still favours boys than girls. Cultural values put to boys in many Lake Basin tribes; dropouts among girls due to absenteeism, pregnancy, death and marriage and engaging girls to household work than boys are mentioned as constraints to girls enrolment in secondary education and higher learning.

Despite actual participation of women in farming activities and other non-farm activities, they lack access to new technological innovations. Most of the Lake Basin traditions deny women of accessing extension services on the pretexts of avoiding relationships with male extension workers. This leaves women more vulnerable to poverty and also HIV/AIDS.

#### **8.4 Priorities**

- Equal access to education and training
- Gender mainstreaming in all activities
- Women empowerment in decision-making and politics

#### **8.5 Vision**

“A community with equal participation in decision-making and access to resources, ownership and control.”

#### **8.6 Strategies**

Strategies to achieve equal gender participation in decision-making and access to resources ownership and control include:

- Strengthening of households through provision of training, knowledge and skills, legal literacy, civic education and democracy;
- Responding to and meeting the needs of special groups of women, children and youth in order to reduce their workload;
- Strengthening household income generating projects; and
- Mainstreaming gender in all activities.



Annex 1

**Matrix Summarizing 6 Policy Areas**

Presenting

Vision, Priority Problems and Challenges, and Proposed Strategies

<b>Policy Area 1: Ecosystems, Natural Resources Management and Environmental Protection</b>		
<b>Vision</b>	<b>Priority Problems/challenges</b>	<b>Suggested Strategies</b>
A prosperous livelihood, and enhanced ecosystem, natural resources management and environmental protection	<b>[1]</b> Promote and strengthen large and small-scale sustainable fisheries development and management	<ul style="list-style-type: none"> <li>• Providing extension services and effective credit schemes and facilities for small scale and artisanal fish folks</li> <li>• Supporting women activities and participation in the fishing industry</li> <li>• Raising awareness</li> </ul>
	<b>[2]</b> Increase agricultural and livestock productivity through sustainable use of land, water and other natural resources	<ul style="list-style-type: none"> <li>• Providing extension services and effective credit systems</li> </ul>
		<ul style="list-style-type: none"> <li>• Promoting and strengthening irrigation</li> <li>• Promoting accessibility to credit facilities/soft loans to smallholder farmers; and improve market systems</li> <li>• Promoting agro processing industries</li> <li>• Promoting commercial farming</li> <li>• Providing essential services (reliable and water supply and other infrastructure, extension services, veterinary services, reliable markets, etc) Providing credit facilities/soft loans</li> <li>• Awareness campaigns on all aspects of good animal husbandry</li> </ul>
		<ul style="list-style-type: none"> <li>• Promoting good breeds, improve pasture, providing effective veterinary services, minimizing vulnerability to drought stresses by developing appropriate water infrastructure</li> </ul>
		<ul style="list-style-type: none"> <li>• Making proper land use planning</li> </ul>

Vision	Priority Problems/challenges	Suggested Strategies
	<p>[3] Integrated water resources assessment, planning, development and management (includes water quality management and pollution control, ecosystem and environmental protection)</p>	<ul style="list-style-type: none"> <li>• In-lake Water Quality and pollution Monitoring</li> <li>• Industrial and Municipal Waste Management</li> <li>• Management of Pollution loading</li> <li>• Promoting sustainable industrial development</li> <li>• Raising awareness, and voluntary compliance</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Strengthening and harmonizing sectoral environmental policies and legislations towards supporting environmental management</li> <li>• Strengthen enforcement capability</li> <li>• Supporting community participation</li> <li>• Promoting voluntary compliance</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Investment in water development infrastructure</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Formulation and implementation of policies on integrated, coordinated and sustainable land-water-environment planning, development, and management</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Promoting environmentally sound technologies for efficient and safe water use</li> <li>• Creation of a conducive environment for the private sector participation in implementation of water supply programs</li> <li>• Promoting sustainable integrated natural resources development and management</li> <li>• Strengthening legislation</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Strengthening capacity for urban planning and development</li> <li>• Establishing proper solid waste disposal sites</li> <li>• Strengthening institutional capacity in waste management</li> <li>• Creating public awareness on safe management of wastes</li> </ul>

		<ul style="list-style-type: none"> <li>• Providing equitable rural and urban services (water, roads, health, etc)</li> <li>• Promoting wise, sustainable use of resources</li> </ul>
		<ul style="list-style-type: none"> <li>• Reducing the use of wood fuel as a source of energy and maintaining it at manageable and sustainable levels</li> <li>• Creating of awareness of local communities on importance of participatory forestry management</li> <li>• Harmonization of cross-sectoral policies/strategies and legislations related to forestry</li> <li>• Establishing community owned forest projects, and encouraging communities to establish nurseries and woodlots</li> </ul>
		<ul style="list-style-type: none"> <li>• Promoting development and use of alternative sources of energy</li> </ul>
		<ul style="list-style-type: none"> <li>• Creating enabling environment for private sector investment in wildlife utilization and conservation</li> <li>• Encouraging women involvement in wildlife related activities</li> <li>• Encouraging intro education of Wildlife Management Areas to ensure local communities benefit from wildlife conservation</li> </ul>

<b>Policy Areas 2: Production and Income generation</b>		
<b>Vision</b>	<b>Priority Problems/challenges</b>	<b>Suggested Strategies</b>
Resources sustainably used and managed and productivity promoted with increased income levels of communities in the basin	<b>[1]</b> Improving rural infrastructure, and facilitating investment and financing in all sectors (e.g. development of the sector specific incentive package)	<ul style="list-style-type: none"> <li>• Increase utilization of water resources for irrigation</li> </ul>
		<ul style="list-style-type: none"> <li>• Encourage financial institutions to support individuals, communities and private sector by formulating affordable credit schemes</li> </ul>
		<ul style="list-style-type: none"> <li>• Provide adequate and clean water for livestock</li> </ul>
		<ul style="list-style-type: none"> <li>• Improve rural infrastructure (roads, water supply, dips, transportation etc.)</li> </ul>
		<ul style="list-style-type: none"> <li>• Promote eco-tourism</li> </ul>
		<ul style="list-style-type: none"> <li>• Encourage local community ownership of wildlife resources through wildlife management areas</li> </ul>
		<ul style="list-style-type: none"> <li>• Promote environmentally sound technologies for efficient and safe water use and waste management</li> </ul>
		<ul style="list-style-type: none"> <li>• Build capacity for environmental management in mining</li> </ul>
		<ul style="list-style-type: none"> <li>• Promote the involvement of private sector and communities in developing goods and services</li> </ul>
	<b>[2]</b> Strengthening market efficiency for inputs and outputs in all sectors	
<ul style="list-style-type: none"> <li>• Strengthen land use management institutions at district and village levels</li> </ul>		
		<ul style="list-style-type: none"> <li>• Enhance and promote cooperative movement as bargaining centers for better prices</li> </ul>
		<ul style="list-style-type: none"> <li>• Improving marketing infrastructure in all sectors</li> </ul>

Vision	Priority Problems/challenges	Suggested Strategies
	<p>[3] Increasing productivity in all sectors</p>	<ul style="list-style-type: none"> <li>• Increase use of improved farm input packages particularly improved seeds, and agro-chemicals (fertilizers pesticides etc.)</li> <li>• Increase government support in research and extension services in all production sectors</li> <li>• Enhance crop diversification</li> <li>• Enhance integrated fisheries management (regulations, enforcement, policies)</li> <li>• Facilitate co-management of fisheries (increase legitimacy of fishing regulations in the eyes of fishermen)</li> <li>• Improve the quality of grazing pastures</li> <li>• Government to provide enabling environment for value-added processing industries to provide incentive for rural production</li> <li>• Create public awareness on existing land laws and appropriate land use management</li> <li>• Resolving land use conflicts and environmental problems through land use planning procedures according to the legislation</li> <li>• Support women activities and participation in fishing and mining</li> </ul>

<b>Policy Areas 3: Living Condition and Quality of life</b>		
<b>Vision</b>	<b>Priority Problems/challenges</b>	<b>Suggested Strategies</b>
A well educated society with high quality of life, well developed infrastructure and free from poverty.	<b>[1]</b> Improve infrastructure	<ul style="list-style-type: none"> <li>• Attracting investors in lake water transport and transportation and road transports networks</li> <li>• Establishing rural electrification programs</li> </ul>
	<b>[2]</b> Increasing access to education, by focusing on the equity issue, strengthening vocational training institutions, and re-orienting education towards self-employment	<ul style="list-style-type: none"> <li>• Streamline the management structure of education by placing more authority and responsibility on schools, local communities, districts and region</li> </ul>
		<ul style="list-style-type: none"> <li>• Motivate and mobilize private investment in education</li> </ul>
		<ul style="list-style-type: none"> <li>• Encouraging the private sector and individuals to invest in education development</li> <li>• Increasing annual intakes of students joining higher learning institutions</li> <li>• Rehabilitation and construction of schools including houses for teachers</li> <li>• Increasing annual intakes of students joining higher learning institutions</li> <li>• Strengthening capacity building program for teachers</li> <li>• Promoting and revive adult education program</li> </ul>
	<ul style="list-style-type: none"> <li>• Strengthening school committees and inspection</li> </ul>	



Vision	Priority Problems/challenges	Suggested Strategies
	<p>[3] Increased economic growth and decreasing food and income poverty through increased investment in the production sectors</p>	<ul style="list-style-type: none"> <li>• Address poverty-environmental linkages</li> <li>• Creating, promoting and strengthening credit provision in both rural and urban areas</li> <li>• Promoting agro-processing industries in the rural areas and encouraging increased investment in small-holder irrigation systems and improving marketing services for agricultural and livestock products</li> <li>• Improving productivity, profitability and commercialization of agriculture and livestock</li> </ul>
	<p>[4] Increased equitable access to health services and strengthened capacity to carry out campaign against HIV/AIDS in order to combat the pandemic</p>	<ul style="list-style-type: none"> <li>• Creating awareness to public on the link between population, resource, environment, poverty eradication and sustainable development</li> <li>• Enhancing public awareness on environmental conservation</li> <li>• Creating, promoting and strengthening credit provision in both rural and urban areas</li> <li>• Improving productivity of small scale- farmers/fishermen and industries and promoting non-agriculture production in rural areas</li> <li>• Ensure adequate supply of essential drugs and other hospital supplies</li> <li>• Expanding and strengthening health program targeted to the needy, such as HIV / AIDS, malaria and Tuberculosis victims</li> <li>• Improving standard of living of the people</li> <li>• Strengthening institutional capacity to implement health sector program, particularly health care</li> <li>• Building the capacity of health service providers in rural and urban areas</li> <li>• Increasing the number of health centers, facilities and trained staff in rural areas</li> </ul>

<b>Policy Area 4: Population and Demography</b>		
<b>Vision</b>	<b>Priority Problems/challenges</b>	<b>Suggested Strategies</b>
Lake Victoria Basin experiences improved quality of life of local communities through sustainable use of local resources while ensuring that their economic growth rate is above population growth rate.	[1] Sensitize the public on the linkages between rapid population growth, natural resources utilization and development	<ul style="list-style-type: none"> <li>• Integration of population issues in development planning process</li> <li>• Establishing an appropriate system of managing and distributing resources among the users</li> </ul>
	[2] Improved health services, community access and life expectancy	<ul style="list-style-type: none"> <li>• Counteracting and controlling HIV/AIDS</li> </ul>
		<ul style="list-style-type: none"> <li>• Improving health infrastructure, e.g. personnel, facilities and equipment</li> </ul>
		<ul style="list-style-type: none"> <li>• Reducing infant, child and maternal mortality rates</li> <li>• Improving life expectancy to 60 years</li> </ul>
[3] Strengthened security in areas close to refugees camps	<ul style="list-style-type: none"> <li>• Improving and sustaining the health and well being of mothers and children</li> <li>• Creating awareness to the public of the linkages between population, resource utilization, environment, poverty reduction and sustainable development</li> </ul>	
		<ul style="list-style-type: none"> <li>• Establishing preparedness plan for handling refugees</li> </ul>

<b>Policy Area 5: Governance, Institutions and Policies</b>		
<b>Vision</b>	<b>Priority Problems/challenges</b>	<b>Suggested Strategies</b>
A prosperous community that observes the rule of law that is well integrated with institutional framework and supported by an enabling policy environment developed from the grassroots.	[1] Impart civic education to the public	<ul style="list-style-type: none"> <li>• Imparting civic education to the local communities and law enforcement authorities</li> <li>• Creating awareness to the public on the constitutional and human rights</li> </ul>
	[2] Ensure integrated and participatory planning in local government authorities with respect to the involvement of people in social, political and economic decision making	<ul style="list-style-type: none"> <li>• Strengthening the local Government institutions to actively involve people in their own development planning</li> </ul>
	[3] Create an environment that encourages people to form, join, and engage in civil society organizations voluntarily in pursuit of their development and service delivery needs	<ul style="list-style-type: none"> <li>• Promoting and improving civil society organizations participation in decision making related to their development</li> </ul>
	[4] Strengthened accountability, ethics, and transparency the system at all levels of society.	<ul style="list-style-type: none"> <li>• Strengthening the capacity of law enforcement units;</li> <li>• Enhancing and institutionalizing the respect for human rights</li> <li>• Strengthening appropriate anti-corruption measures.</li> </ul>
	[5] Foster gender equity in decision making, information, property ownership and control; and opportunities	<ul style="list-style-type: none"> <li>• Mainstreaming gender in all activities</li> </ul>

<b>Policy Area 6: Gender</b>		
<b>Vision</b>	<b>Priority Problems/challenges</b>	<b>Suggested Strategies</b>
A community enjoying equal participation in decision-making and access to resources, ownership and control.	<b>[1]</b> Equal access to education and training	<ul style="list-style-type: none"> <li>• Strengthening of households through provision of training, knowledge and skills, legal literacy, civic education and democracy</li> </ul>
	<b>[2]</b> Women are empowered in decision-making and politics.	<ul style="list-style-type: none"> <li>• Responding to and meeting the needs of special groups of women, children and youth in order to reduce their workload</li> </ul>
		<ul style="list-style-type: none"> <li>• Strengthen household income generating projects and enable them to participate in decisions and ownership of family property</li> </ul>
<b>[3]</b> Gender is mainstreamed in all activities	<ul style="list-style-type: none"> <li>• Mainstreaming gender in all activities</li> </ul>	

## Annex 2

### **Problems and Challenges Faced in Implementation of the Vision Building Process,**

## **Problems and Challenges Faced in Implementation of the Vision Building Process**

During the implementation of the Vision and Strategy Development, the Project for sustainable Lake Victoria Basin was faced with many problems and the participants were confronted with many challenges along the way.

### ***Problems Faced***

Delays in formulating and commissioning of the NTF greatly affected the time schedule, and consequently the total approach and methodology of Stakeholders' Vision and Strategy Development Process.

The difficulties in securing funding for the NTFs and NCs activities and inadequate funds critically aggravated the situation. Given the pivotal role of the NTF in the process, these problems have negatively influenced the broad processes of equal participation and stakeholders consultations envisaged in the ToRs.

In addition, the financial uncertainties and what seem to be somewhat slow and cumbersome WB procedures greatly affected the quality of the report and tight time schedule for the completion of the project. This sad fact posed a great challenge to the National Consultant and indeed the NTF members on how to conduct a complete process with an extremely delicate financial situation.

The work of the NTF was faced with mandate placed on them. Generally, the challenge for the NTF has been how to balance commitment to the assignment in the face of ad hoc implementation process and financial crisis. The threat to abandon the process was real, save for the NTF's concern for the people of the Lake Victoria basin who willingly gave information and knowledge, and were ready to receive feedback and advise on how best to make use of the available resources to bring about progress in the development of the Vision for the Lake Victoria Basin.

In view of the above constraints the NC spent noticeably more time than allocated in the initial contract and has by far exceeded the budgets for remuneration, which she has to date never received from the World Bank despite of the clear outputs achieved in the Tanzania process. She has voluntarily continued to coordinate the work of the NTF against the contractual agreements.

The 'on and off' character of the Vision Building Process has also had significant impacts on the working conditions of the NC and the availability of the NTF members. Due to the delays and postponement of activities strategic personnel/NTF members had partially been affected to give their contributions in the Process.

### **The challenges**

One of the major challenges was the terms of references (ToRs), the proposed project process and the expected outputs. Roles and responsibilities of various parties involved in project organization were not clearly demarcated. Some were written down while others were simply interpreted. As a result, assessment of the input in the implementation process reveals that some people may have done comparatively too much while others had much less contributions or none.

The selection of the coverage area for the Project posed a great challenge as the population sample was from the entire Lake Basin and its Catchments, of which Tanzania share about 51%. Specifically, we are referring to the selection of 31 participating villages from more than 1976 listed in the Lake Basin. The main two criteria used to agree on geographical coverage of the Project were financial and time constraints. These criteria contributed to less than 2% involvement and inadequate participation of the stakeholders.

Due to the time and financial constraints most activities were conducted in parallel. This necessitated almost full time involvement of the NTF members, which did not turn out to be practical. The involvement and use of local authority staff in supporting the work of the NTF was the only alternative at some point in time.

Another challenge was for the National Consultant to be able to build the capacity of facilitators at different levels to carry out the process and achieve expected outcome. The facilitation teams were formulated in each district to allow for effective mobilization and cost-effective villages and stakeholders' consultation process. Within a week, the NTF with support from the trained district staff conducted consultation workshops and focus group discussions in more than 31 villages and met with about 314,789 people (of which 50% women). To be able to mobilize part of the NTF members to conduct sector interviews with about 19 Ministries, Departments and Agencies (MDAs) within one week was another challenge.

Also, to harmonize NTF members so that they not only conducted consultations, but that they also worked together to synthesize and analyze the field information, produce field reports and a draft country report for presentation to the national forum is a milestone. Generally, working against deadlines in parallel with their normal work schedules indicates their high commitment to their Country.

On the other side, members of the NTF appreciated the problems and challenges faced in providing strength, courage, creativity and innovativeness.



## Annex 3

### **List of Districts, Wards and Villages visited in Mara, Kagera and Mwanza Regions**

**List of Districts, Wards and Villages visited in  
Mara, Bukoba and Mwanza Regions**

<b>Region</b>	<b>District</b>	<b>Ward</b>	<b>Villages/streets</b>
<b>MARA</b>	Tarime	Tarime urban	Tarime Urban
			Buhemba
			Sabasaba
			Ronsoti
			Nyamisangura
	Bunda	Guta Ward	Guta
			Nyambehu
			Kinyambiga
			Tairo
	Serengeti	Ikoma Ward	Ikoma
			Robanda
	Musom Urban	Urban Centre Council	Buweri
Mwigobero			
Nyasho			
Musoma Rural	District Council		
<b>KAGERA</b>	Muleba	Izigo	Katoke
			Izigo
			Kabale
			Itoju
			Bushumba
			Kimbungu
		Bumbile Island	Bumbile
	Bukoba Rural	Rubafu	Kyamalange
			Katale
			Rubafu
	Bukoba Urban	Hamugembe	Kashabo
			Omukigusha
			Hamugembe
	Ngara	District Council	
	Biharamulo	District Council	
	Karagwe	District Council	

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<b>Region</b>	<b>District</b>	<b>Ward</b>	<b>Village</b>
<b>MWANZA</b>	Geita	Katoro	Chibingo
			Nyamigota
			Inyara
			Katoro
			Kaduda
			Ibondo
			Silabela
	Misungwi	Kijima	Kijima
			Isakamawe
			Mwamaguha
	Magu	Kalemela	Lukungu
			Lamadi
			Mayega
			Changasa
			Bushingwamhala
	Mwanza City	Mbugani-Nyamagana	Mabatini
			Rufiji,
			Mecco,
			Unguja
			Bondeni
			Ghana
			Fahari
			Pasiansi
			Uhuru
			Butimba
			Nyakato
	Kitangili		
Sengerema	District Council		
Kwimba	District Council		
Ukerewe	District Council		



# The Vision and Strategy Framework for Management and Development of Lake Victoria Basin

## Annex IV: Uganda Country Report



A report by

The Uganda National Task Force

September 2003

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## **ACKNOWLEDGEMENTS**

The work of completing this project and report would not have been possible without the immense contribution of many Ugandans whose commitment to this project was so invaluable. Recognition goes to the stakeholders in all the communities that participated in the study in the five districts. For a week in ten communities in the countrymen, women, farmers, fisher folk, youths and local leaders put a side all their work.

They devoted that time to talking about their livelihoods and the livelihoods of the others and how those livelihoods impacted on the lake. They also put in their best in proposing ways of improving the present to ensure a better and sustainable future for the Lake Victoria basin and their own livelihoods.

At the district and community levels the facilitating NGOs for over three months put their own programs aside and devoted time and resources to this process. Some of these organisations have even taken up some of the issues raised for inclusion in their own program activities. During that period and working under strict time frames they traversed many places including spending nights on the lake to ensure that the results are delivered in time.

Further recognition goes to the Chairperson and members of the National Task Force who devoted great support and effort to this process at all its stages and are committed to taking forward the outcomes even beyond the current project. By reviewing all documents and participating in all events they ensured that the process is qualitative handled.

The World Bank through Ms Mary Bitekerezo performed the tireless job of ensuring that the project remains on course and is well resourced. She also provided crucial technical guidance to the National consultant and the NTF. Without that guidance the process may not have turned out the outputs it did.

The moral and political support and commitment of the Government of Uganda to this process can be viewed as the king pin in this process. Outcomes of this process have implications on current policy while some point to policy gaps. Needless to say however, the representatives of the government at the various stages of this process indicated the government commitment to address those issues. It is therefore with profound satisfaction that we commend and all those individuals and affirms that the process is truly indebted to them all.



## **List of Acronyms**

CAO	Chief Administrative officer
CBO	Community based organisation
CSO	Civil Society Organisation
FGD	Focus group discussion
FO	Fisheries Officer
GoU	Government of Uganda
HSSP	Health Sector Strategic plan
IC	International consultants.
IRDI	Integrated rural development initiatives
LC	Local Council
LVEMP	Lake Victoria Environment Management Project.
MFPEd	Ministry of Planning and Economic Development
NTF	National task force
NC-	National consultant.
NTF	National Task Force
NC	National Consultant
NEMA	National Environment Management Authority
PEAP	Poverty Eradication Action Plan
PESP	Poverty Eradication strategy Paper
PMA	Plan for modernisation of Agriculture.
RUCID	Rural Communities in Development
TOYODA	Tororo Youth Development Association.
TBA	Traditional Birth Attendant
UPE	Universal primary education
UPPAP	Uganda participatory poverty Assessment Project.
WB	World Bank

## Executive Summary

This report presents the lake Victoria Visioning, prioritisation and strategy development process in Uganda which was spear headed by the National Task force with extensive consultations involving various stake holders at the community, district and national levels.

This visioning and prioritisation process, which took place between November 2002 and April 2003, builds upon the implementation of Lake Victoria Environment Management project and is intended to provide and inform the development efforts for sustainable utilisation of Lake Victoria basin resources.

The tools used included historical transects, mobility maps, livelihood analysis as well as visioning which entailed analysis present situations and how they should evolve to lead to the desired future. The process also entailed formulation of strategies and indicators.

The visioning and strategy development process was based on five key thematic areas:

- Ecology.
- Natural resources utilisation and income generation,
- Technical infrastructure and urban economy.
- Social and demographic conditions.
- Governance and institutions.

Five out of the seventeen districts within the lake Victoria basin were sampled and selected for purposes of this visioning exercise. The criteria for selection included: Proximity to the lake, observed negative impacts and economic significance. Other factors that were also considered were availability of local organisations to lead the process and time and resources available.

At the community level, key stakeholders such as women, farmers, fisher folk, youths and local leaders expressed their perceptions and opinions on the thematic areas. They reached common understanding on a road map for attaining the desired goals.

The views generated at the community level were subsequently presented and their implications discussed at district and national fora. They thus formed the basis for developing a National vision and strategies for the next fifteen years.

**The Uganda vision for Lake Victoria states:**

***“ A Lake Victoria Basin, which is well planned and managed providing sustainable benefits, with a prosperous population meeting their development needs without depleting the natural resources and neither degrading the environment.”***

The attainment of this vision will require a multi pronged approach. This will entail increased participation in policy formulation by different actors and stakeholders,

harmonisation of laws, within the country and the region. There will be need for increased co-operation among the various actors, civil society, private sector and government in the management of the lake and other natural resources within the basin as well constant and rigorous monitoring using the indicators developed.

In conclusion, this visioning and strategy development process provided a unique and rare opportunity people of different social status and diverse values, opinions and perceptions to share views and reflect on the present and the future aspirations.

### **Structure of this report**

The report is presented in six chapters based on the format that was proposed by the national consultants albeit with variations made to suit the peculiarities of the Uganda process and context.

There are a few introductory pages including the executive summary and some few introductory features about the overall project.

Chapter one presents the project background including aims, purpose and overall values and principles. It also covers the methodology and approach used as well as the roles and responsibilities as they were shared out among the various stakeholders and actors in the process.

It also presents a detail of the process including time schedules and other related factors such as milestones and stakeholders and institutions that participated. The chapter also presents a summary of the outputs from the project.

Chapter two gives a background to the various policy areas examined by the project, (Ecology and environment Natural resource utilisation, Technical infrastructure, Social and demographic conditions, and Governance and institutions), mainly highlighting the current situation and its implications.

#### **Chapter Three**

Highlights some of the threats to the well-being and sustainability of lake Victoria.

#### **Chapter four**

Examines the strategies recommended for halting further deterioration of the lake and its catchment.

Chapter five summarises in a matrix form, the outcomes from the national workshop presenting priority strategies set on each thematic area and the indicators developed. The chapter also highlights the implications of this prioritisation and some of the challenges that this prioritisation presents.

Chapter six is a conclusion with proposals for taking the findings from this study forward for Uganda.

## **1. Introduction – Project Background**

This report presents the processes and outcomes of the Lake Victoria Visioning and Strategy Prioritisation process for Uganda.

The process took place at a time when the first phase of the Lake Victoria Environment Management project (LVEMP) was winding up. LVEMP effectively commenced in 1997 during which period it addressed the following components: Fisheries research, Fisheries management, Water hyacinth control, Water quality and quantity monitoring, Industrial and municipal waste management, Land use management, Wetlands management, Catchments a forestation, Support to Makerere University Zoology department and a Coordinating Secretariat.

LVEMP pursued three broad objectives:

- Maximising the sustainable benefits to the riparian communities using resources within the basin to generate food, employment, and incomes supply safe water and sustain a disease free environment.
- Conservation of biodiversity and genetic resources for the benefit of the riparian and global communities.
- Harmonisation of natural resource management programs in order to achieve to the maximum extent possible the reversal of increasing environmental degradation.

In a way, the end of project period for LVEMP had a great influence on the visioning and prioritisation process. This arose because stakeholders both at community, district and national level had had contact with LVEMP I and saw the visioning process as an opportunity to contribute to an improved second phase.

The primary area of focus for this visioning process was the Lake Victoria basin. In Uganda the basin covers seventeen districts including Kampala, Kabale, Ntungamo, Rakai, Mubende, Mayuge, Bugiri, Mukono, Masaka, Kalangala, Wakiso, Ssembabule, Mbarara, Busia, Mpigi, Iganga and Jinja.

Five of the seventeen districts were selected to participate in the visioning process on a plot basis. The outcomes from those five districts subsequently informed the processes at national level which this report covers.

### **1.1 Aim/purpose of the Project**

The objectives pursued by the visioning and prioritisation process in the Uganda context were:

- To develop broad realistic and achievable objectives and indicators for the sustainable management of Lake Victoria in a time frame of 15 years.

- To develop mechanisms that will enable stakeholders advocate their interests provide feed back to government and monitor progress towards achieving set goals.

The process also pursued four specific milestones:

- Stakeholders formulating a shared vision and agreeing on priority objectives that are realistic and achievable in the next fifteen years.
- Stakeholders defining monitorable indicators to measure the progress towards achieving the broader vision of sustainable utilisation and development accruing from initiatives by stakeholders of lake Victoria.
- Providing for instruments and space that allow stakeholders to advocate their interests and to share information with each other and the governments about the progress of the visioning program.
- Providing a basis for review and refinement of the vision as during and after the implementation of the follow up project.

The district priorities<sup>1</sup> are annexed in this otherwise national report for two main reasons:

- The national priorities highlighted in this report are based/drawn from the District priorities and hence there exists a very close linkage.
- There are district issues that were not mentioned/prioritised at the national level and yet are quite significant to the Lake Victoria and its basin.

## **1.2 Overall values and principles**

A participatory process and approach was used in facilitating the visioning and prioritisation processes at the various levels. This, in the case of Uganda, was very appropriate and in keeping with the general trend in the country where emphasis is increasingly placed on promoting bottom-up processes and encouraging participation and ownership of development processes by all stakeholders.

The approach made it possible for many categories of stakeholders to present their individual feelings and opinions on related issues and for compromise positions to be reached on what constituted priority strategies at community, district and national levels.

In addition, because the project comes as a precursor to the next phase of the LVEMP, it was necessary that a wide range of stakeholders contributes to the strategy development so that the interventions that are eventually designed and undertaken are correct and meet the desired interest of all stakeholders.

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<sup>1</sup> Presented as appendix one

At the National level the process provided an opportunity for people from different shades of life and at different levels of the social structure to participate together in discussions, present proposals and agree to national level vision and strategies for the next 15 years.

### **1.3 Methodology and approach**

To achieve the above, it was essential for grassroots stakeholder groups such as women, fisher folk, youth, and farmers to express their interests and concerns against those of more powerful and stronger interest groups such as technical people, industrialists and politicians. The rapport process was also an opportunity for the later group to appreciate the interests of the former.

While it would have been appropriate for all the seventeen to participate, time and resources could not allow. Five out of the seventeen basin districts in Uganda were selected to spearhead the process. These were selected on the basis of their proximity to the lake, the extent to which human activity in the district negatively impacted on the lake and their economic significance of the lake to the human activities in the district.

In each district a local organisation, NGO, was selected to facilitate the community and district processes save for Mayuge district where officials from the Environment and Community development departments led the process.

Through their roles as facilitators the NGOs developed their own attachment, commitment and ownership of the process in addition to spreading the same ownership to the communities they facilitated. Thus achieving one the project objective of spreading ownership of both outcomes and process.

The Uganda chapter of the visioning and strategy prioritisation process entailed six broad steps:

1. Selection of five districts within the lake Victoria basin for representative participation in the visioning and prioritisation process. The districts selected were:
  - Kampala representing an urban and industrial district from the central region.
  - Bugiri representing a rural district with a population that consumes a lot of fish and from the East
  - Rakai representing a rural district, with land use issues and from the West.
  - Mubende is rural, not directly bordering the lake but with several satellite lakes.
  - Mayuge initially selected as a training district presented an additional source of vision information that fed into the overall vision development process.

2. Identification and training of facilitating individuals drawn from organisations and departments in the five selected basin districts and a few from national level organisations.
3. Facilitating stakeholder-visioning exercises at community level was very important as it presented opportunities for the real users of the lake and its related resources to express their opinions and even express their fears. In all the districts community level processes were accorded the most time. At least one week was spending with community members in each of the communities.

On average two communities were selected in each of the five districts. The criteria for selection of the communities mainly took into account presence of key stakeholder groups such as fisher folk, farmers, and pastoralists as well as women and youth groups. This was in addition to considerations over distance given the time limitations that the project faced at the time and presence of a local NGO that had the skills and commitment to facilitate and document the community level processes in the available time. For each of the communities the visioning took one week during which the stakeholders were given ample time to present their respective views.

4. At the district level a cross section of key individuals were brought together for a two-day workshop. These included district technical people, traders, and representatives of CSOs, Women leaders, youth representatives and representatives of the communities that had earlier participated in community level processes. During the district workshops, outcomes from the community processes were presented and they formed the basis for initiating reflection and discussion on the situation in the entire district. The aspirations of the people in the district and the potential strategies that could be adopted to achieve the vision were debated and eventually informed the nature of district vision and priorities and strategies adopted at that level.
5. The visioning and prioritisation outcomes from the five district processes were summarised, and presented to a National workshop that brought together a wide range of stakeholders in the country. The outcomes eventually formed the basis for discussion and prioritisation at the national level.
6. Prioritisation at the National workshop are summarised in chapter four of this report and constitute the Uganda chapter of the visioning and prioritisation process for the entire lake Victoria basin.

The process made it possible for the diversity of stakeholders at the various levels, especially national, to analyse their own interaction with the lake and its environment and that of other stakeholders. The stakeholders then ranked and prioritised strategies and options that could be taken forward.



This helped to strengthen cooperation and initiate dialogue among the different stakeholders while at the same time beginning to see a common vision at district and subsequently at national level.

#### **1.4 Field work approach**

Participatory mechanisms and approaches were used to facilitate the self-analysis of selected stakeholder groups in cooperation with others. They then ranked and prioritised both critical factors in their current manner of interaction as well as important strategies that could lead them to a better-envisioned future.

At community level, an average of two communities were selected in each of the five districts. In each community discussions were held with key stakeholders, the youths, Women (providing food and other services at the landing sites), Fisher folk (including all manner of service providers such as fish mongers, boat and net owners and labourers), pastoralists (those who practice free range grazing), Farmers, youth groups (sand miners, timber dealers, charcoal burners and brick makers. Others were local councillors and community development workers with a mandate to spear head development in the district.

Stakeholders were engaged in analytical processes, which was a landmark achievement for the project as it offered differently positioned stakeholders an opportunity to express their perceptions about related issues. They used various tools to analyse their current situation as well as develop strategies. Tools used included:

##### **(i) The historical transect**

Offered an opportunity to examine how different trends impacted on one another and the effect this had on people's lives. In most of the communities stakeholders were able to highlight the effect of increasing populations on forests and forest cover, and the effect of declining forest cover on fish availability. At the vision level, the information generated in this way made it easy for the people to determine the kinds of things that need to be done in order to make life better in the future.

##### **(ii) The mobility maps**

In order to appreciate the notion of a vision or desired future, it was necessary to examine the current situation and base on that to identify issues that represented the desired tomorrow.

Through this particular tool stakeholders examined the patterns of their livelihoods in respect to which services they accessed from outside their immediate localities and villages, the distances and time this consumed and the cost implications thereof.

Information generated through the mobility maps enabled the stakeholders to set realistic goals and strategies for the future they desire to see in fifteen years.

### (iii) The livelihood analysis

By taking a few sample stakeholders and studying their coping mechanisms it was possible to determine which categories of people suffered most with the changing ecological and environmental patterns (plate 1). It was also possible to determine which livelihood habits bore worst affects on the lake basin and its general environment.

### (iv) Focus group discussions

All the above tools were facilitated using focus group discussions. During such discussions the facilitators, through semi structured interview approach, encouraged the different individuals to share their experiences and to propose new ideas. Consensus was sought along the way for whatever ideas were taken forward.



Plate 1: A participant at a community workshop presenting a livelihood analysis from her stakeholder group to other groups

## **1.5 Project organisation, roles and responsibilities**

Although the East African Community was the main client for the assignment, the participating stakeholders at the various levels were equally clients since they were at the centre stage of the entire process. In fact for many, the study was empowering for instance, in some communities stakeholders agreed on immediate action points even as the process was still going on.

Four NGOs<sup>2</sup> nominated individuals who after participating in the facilitator's workshop were at the forefront of facilitating the community and district workshop processes in their respective districts.

The World Bank played the crucial role of facilitating the process and ensuring timely disbursement of resource and methodological support to the National Consultant and the National Task Force. The World Bank was also instrumental in asking pertinent questions about participation and coverage thus ensuring that the outcome reflected views of a wide spectrum of stakeholders.

The National Task Force, which comprised of eminent individuals<sup>3</sup>, under the stewardship of the chairperson in collaboration with the NC, played the central role of co-ordinating and harmonising the process. The NTF also worked as the quality controller as they actively participated in District and National level meetings where they reviewed and made useful comments on the various report outputs along the way.

The task force also played the vital role of spreading the ownership of the project and ensuring that it achieved a high level of political recognition and acceptability. At the opening of the national workshop the Minister of State for Environment emphasised the need for him to access the final report in order to see that it gains recognition even in the national assembly and that it begins to influence policy design.

Two National Consultants spearheaded the Uganda process. M/s Monica Kaporiri led the process in its initial stages. She had to leave for a job assignment in Nairobi and could not continue with the process. She however handed over the role to Mr. Ssuuna Joseph who facilitated it to its completion.

The International Consultants through their local representatives offered insights whenever approached by especially linking the practical facilitation with the theoretical underpinnings of the whole processes. On several occasions they were on hand to offer technical support at district and national level and to participate in field level activities.

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<sup>2</sup> Profiles of the four organisations are appended

<sup>3</sup> Full list of NTF members is appended at the end of this report

## 1.6. Project implementation

This section summarises the national processes and activities undertaken. One major shift in methodology was the use of local organisations as principal facilitators of the process and not the National task force. This enabled members of the National Task Force to participate in district level workshops and to offer technical insights at those levels more freely.

The facilitating organisations partly selected for their knowledge of the local area, where ideally they were already operational, were able identify appropriate communities and easily mobilise the people for the process.<sup>4</sup> And because these were their operational areas they were able to spend more time with the various stakeholders and to ensure free participation. And hopefully they will be able to offer feedback and follow-up as the outcomes of this process unfold.

## 1.7 Time schedule, activity plans and milestones

The visioning and prioritisation process in Uganda included activities at national, district and community levels. At the national level the major activities included NTF meetings and retreats (for regular consultations, report reviews and updates). The NTF also ensured cross sector participation primarily through its own membership.

At the district and community levels the process entailed discussions and consultations with the different stakeholders and agreeing on strategies and priorities. Below is a summary of the activities.

### Time frame for the Uganda Visioning and prioritisation process

Activity	Time schedule (months2002-2003)						
	Dec	Jan	Feb	March	April	May	June
Regional meetings							
Selection of NTF							
NTF meetings							
Selection of facilitating NGOs							
Training for facilitating NGOs							
Community level processes							
District level workshops							
NTF retreats							
National level workshop							
Report reviews							
Key respondents interviews							
Meetings with IC							
Dissemination and validations (also to continue post project							

<sup>4</sup> Ref to the profile of the facilitating organisations appendix three.

## **1.8 Critical events and adjustments in approach and methodology**

Two key elements of the visioning and prioritisation processes for Uganda that were adjusted were the national workshop, instead of two days it took one day and use of the facilitating NGOs for facilitating the process rather than the NTF members. The merits of these changes have already been explained at the various levels of this report.

## **1.9 Stakeholders and institutions involved**

An attempt was made to consult with as wide a range of stakeholders as possible.<sup>5</sup> The table below summarises the different categories of people consulted.

At the community level, participants participated by discussing their own lives currently; their aspirations and what they felt were viable strategies to help them achieve their life aspirations.

A wider group of people participated at the community level because although an average of 30 participants were targeted for each stakeholder group, this restriction was not adhered to. This was deliberately so again to make the process as engaging as possible.

Still at community level, the process took longer, five days, and new people kept on joining at the different days. This in a way also raised the number of participants.

At the district level the numbers were more restricted partly because of budget considerations but also to ensure ample participation of very one. The district workshops were held over a two-day period and they were residential. It was therefore necessary to select only key stakeholders who could effectively represent others while at the same they contributed to the discussions. An average of 35-40 participants participated in the district workshops in each district.

The national level workshop was the climax of the visioning and prioritisation process. It was intended to serve two inter related purposes. Partly as an additional source of information with a focus on the entire Lake Victoria basin and also as the point of national authentication/ validation and “quality assurance”<sup>6</sup> for the whole process.

The above objectives made it imperative for as wide a scope of representation as possible to participate. To this end therefore 120 stakeholders from a wide range of institutions, interests and stakes were targeted for participation. Out of these 85 participated.

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<sup>5</sup> See annex six - list of stakeholders consulted .

<sup>6</sup> The national workshop in a way was intended to provide the political mandate to the process.

## **1.10 Methods applied**

At the community level various participatory tools were used to enlist participation as much participation as possible. The stakeholder consultation process went on for five days in each community. At the end of the five days all stakeholders in a sub county gathered together and presented their findings to the other stakeholder groups. Attempt was reached at this level of what constituted priorities for the communities at these levels. These were documented and agreement reached on who would participate at the district level workshop to be able to articulate the village level vision

## **1.11 Sampling of groups**

As pointed out earlier participants at the community level were invited primarily because the visioning process relates to their lives as end users and outcomes and decisions taken in the process would affect their livelihoods in various ways. The visioning process offered them an opportunity to inform and influence the process by ensuring that their views and opinions were taken on board.

To the extent possible all-important stakeholders at the different levels were approached and they participated in the visioning.<sup>7</sup> Note however should be made that participation of the other basin districts was minimal even at the national workshop and therefore there is need to carry out a dissemination phase of this project. This will ensure that the ownership is well spread but will also offer the opportunity for further validation of the issues.

## **1.12 Project outputs**

Although the outcomes from the National workshop should ideally be the climax in the country process, this report presents outputs drawn from two levels national and district. This was necessary so as to keep in the limelight as wide a scope of the issues that were raised in the country process as possible. This also ensures that critical issues raised even if they are just district specific, are not lost when the national level workshop does not consider them significant enough.

The visioning process, as outlined earlier, entailed wide and far-reaching consultation but where the issues raised had to fit in one national framework. This report primarily highlights the national outcomes with a summary of the district outcomes appended. The report thus attempts to maintain that vital link between the various levels at which the visioning and prioritisation was done.

## **1.13 Community level processes**

At the Community level for instance, priorities were set using visualisation and drawings. The outputs from that level therefore were articulated mostly through drawings and pictures<sup>8</sup>. At the district level on the other hand, the major outputs, a

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<sup>7</sup> Ref table 3.3.2 categories of people participating

<sup>8</sup> Community reports are available for more specific referencing.



report highlighting the priorities set and a vision statement, were presented in prose form.

#### **1.14 District workshops**

Five district workshops were held in the five districts where the study took place. At these workshops, people at village, district and the NTF came together to discuss district visions and strategies. The priorities developed at the district level formed the basis for the district reports subsequently shared at the national level.

District workshops also provide the opportunity for community level perspectives to be improved to include perceptions of people and communities from as coverage of the district as possible.

#### **1.15 The national workshop**

The national workshop brought together stakeholder clusters to harmonise, reconcile and adjust their visions and subsequently come up with a shared one. To achieve this cardinal objective in the time available, a wide range of stakeholders were invited from national, district and community levels to a one-day national workshop.<sup>9</sup>

The Hon Minister of State in charge of the environment presided over the opening of the national workshop. He underscored the importance of the process undertaken and especially in regards to Lake Victoria, which is an important economic resource for the three East African countries.

He reiterated the government's commitment to the project and its preparedness to take forward deliberations and decisions at the regional level in regards to the lake basin as a whole and Lake Victoria in particular. The East African Community (EAC) decisions/ recommendations adopted at the regional level will subsequently be tabled before the National Assembly for adoption and to subsequently inform policy formulation and reform in the country.<sup>10</sup>

Later, summary presentations were made, by NTF members, of the issues emerging from the five basin districts that participated. This provided participants with insights about the process and the district outcomes. Participants were also prepared for the crucial role of visioning for the entire basin and developing strategies that they were expected to play.<sup>11</sup>

The five key thematic areas were introduced, briefly discussed and subsequently used as the basis for small work group formation where cross-referencing, harmonisation and discussion on the implications from the districts was done. Each group focused on a single theme, examined what the district had come up with and proposed new issues that had not been covered at the district and agreed on what, in their opinion, were the national priorities.

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<sup>9</sup> Ref List of participants at the national workshop appendix five

<sup>10</sup> Ref ministers speech attached

<sup>11</sup> The minister's speech is appendice one.



As the above process went on, a sixth group studied the visions developed at district level. The members of that vision group used their global knowledge of the entire lake Victoria basin to propose an all-embracing vision for Uganda.

During the later plenary discussions, the six groups presented their perceptions of the current situation and priority strategies based on their respective thematic focus. The national vision that was later produced was examined to determine its consistence with national strategies produced.

### **1.16 Process Challenges and constraints**

It is not possible to handle a project of this nature without experiencing some form of challenge or constraint. However despite the constraints that are mentioned below it is gratifying to note that the project was completed successfully.

Agreeing on team composition to the National Task Force was the first major constraint the project faced. Misconstruing the role and mandate of the Task force and how it was to relate with the other actors caused initial delays to the process. These were however speedily overcome and the Task Force subsequently well constituted to bring together people of eminent personalities. The task force was a crucial thread that kept the entire process together by offering direction and technical guidance.

The second challenge was identifying organisations that had the skills and time to facilitate community and district processes and were willing to do it at the costs that were available. Once this was done, the next challenge was to equip the people selected with the knowledge and skills to facilitate a visioning process. For many this was the first time that they were being introduced to the process and figuring out the outcomes took some time.

Time and co-ordinating the process became the next challenge. All district processes took off more or less at the same time and each district facilitating team had its own peculiarities and needs. Therefore at the beginning each district needed a lot of mentoring and technical support especially in adopting the tools to respective situations. However when the process got going especially at community level the need for support declined.

Handling attitudinally-generated expectations arose, as another constraint and challenge for the Uganda process. Whenever the World Bank is mentioned, for many this tends to be synonymous with money. Therefore many people expected fat allowances and other payments for participation in the process. However, when such hefty monies were not forthcoming some of the stakeholders toned down their contribution.

One other challenge especially experienced at the district level was getting the key people like the chairpersons and the Chief Administrative officers CAOs to participate especially in the district workshop. While the turn up of such high level people was low at the district workshop, other district level heads of departments actively

participated. The chairpersons on the other hand were quite active at the National level workshop.

Perhaps the major challenge that arose in the course of the entire process was putting together the multitudes of information that were generated in this process. At the community level the stakeholders spent a whole week during which they discussed issues of livelihood, history mobility and visioning. In each community the participants generated crucial information that had to be captured. This challenge is evidenced by the various report outputs that accompany this final report.

What now remains is for this information to be used to by all stakeholders and key actors in the region and Lake Victoria Basin in particular to design interventions based on the strategies that have been proposed. And since the East African Community is at the fore from even this challenge will be overcome.



Plate 2: The Permanent Secretary Min. of Water Lands and Environment-Uganda, giving a speech at the National workshop. To his right is the Minister of State for Environment, His Excellency the Norwegian Ambassador to Uganda and Assistant Commissioner, Wetlands Inspection Division.

## **2. Background to the lake Victoria catchment**

This chapter provides basic background about lake Victoria. It is divided into two sections. Section A presents the bio physical and ecological aspects of the lake. Section B covers the socio-economic aspects of the lake.

### **Section A: Bio- physical aspects of the lake.**

Lake Victoria is the second largest fresh water body in the world. Within the riparian region it is a very important and significant spectacle. It is the single most important drainage for all the low lands in the Uganda and subsequently gives birth to the mighty River Nile.

It is also habitat to numerous fauna and flora most of which are very rare species. Among these are hippos, crocodiles, and a wide variety of fish.

Until recently the lake had almost been suffocated by the water hyacinth a rare weed that invaded the water body in the late nineties.

#### **2.1 Weather and climate**

The climate and weather conditions that surround Lake Victoria are broadly tropical. The region has however experienced unpredictable weather patterns in recent years. There has also been a drop in rainfall amounts, while an elnino effect led to flooding in other areas. These two extreme conditions have had far reaching undesirable effects of either drought or flooding. In many places soils have been irreversibly eroded and degraded.

#### **2.2 Fisheries**

Fisheries and fishing is the second most important activity among the people living around lake Victoria after agriculture. Fisheries in addition to supplementing nutrition needs of the population around the lake, is also a major source of income. Income is generated from fish sales in both local markets and beyond. This activity has grown with the introduction of fish species that have an export appeal.

In recent years, fish processing for an export market has grown. Fish has thus since ceased being viewed as a local industry. Issues of quality have prominently emerged as an influencing factor in the fishing industry in the region. This has resulted into huge capital investment in the industry as well as bringing competition for the resources.

This scenario comes at a time when the general fishing community is under developed, fisher folk are generally un educated and they use crude fishing methods. Many fishing communities are still caught up in negative beliefs such as the one that no matter how much one drains in the lake it would never be saturated. Such an attitude is bone of lack of awareness especially of the net effects of one's actions. Many of their livelihood activities are a major cause of degradation to the lake thus in both the long and short term endangering their very own survival.

In all three riparian countries there is no harmonised law that guides how fisheries and related activities are governed. Thus activities considered illegal in one country are perfectly legal in another. A case in point is the catching of immature fish. While it is a crime punishable by law in Uganda the case is different in Kenya and Tanzania. This lack of harmony in the laws breeds conflict and deters progress in lake development processes.

### **2.3 Physical, Chemical and Biological aspects of the lake**

The waters of lake Victoria are polluted and the pollution levels continue rising. Most of the pollution comes from the many urban centres that surround the lake. In the case of Uganda, Kampala alone the volume of pollution that the Nakivubo channel takes into the lake is estimated at a million tones per year. The sources of pollution are through increased cultivation, encroachment into water sources such as wetlands, use of fertiliser and pesticides and the mushrooming industries in most of the surrounding urban centres which release their untreated waste into the lake.

Flooding and increased soil erosion has led to lowering the quality of the waters in the lake. In many places direct bathing and easing into the lake, car washing, dumping of waste oils and disposal of human and livestock wastes all add direct pollutants to the lake. In Uganda the National water and sewerage Cooperation in the last five year alone has tripled the amount of water purification chemicals they use per unit of water they supply.

Underground waters that feed into the lake have also gone up in contamination levels. While fishing communities directly release their raw wastes into the lake, inappropriate latrine construction of pit latrines and disposal of garbage especially in urban centres also immensely contribute to the pollution. This is an outcome of both poor sanitation habits and also cases of population explosions where the capacity of the infrastructure in place is overwhelmed.

### **2.4 Catchment soils, Agriculture and livestock practices**

A majority of the communities in and around the lake survive on agriculture and livestock production. In many places there is constant soil and environmental degradation due to related activities. Such activities include clearing land for agriculture, over grazing, sand harvesting, rock and murram mining, overstocking which leads to soil erosion and tree harvesting for timber.

In many upland places water catchment areas have been destroyed. Wetlands I places like Kabale have been converted into farm land, while in Mubende they have been converted into brick making industries. Hence in places like the above, there are no more water reservoirs and when it rains water drains into water systems down stream with devastating effects. The net result of these activities is loss of soils and increasing siltation of the lake.

Low enforcement and adoption of environment conservation measures by the local communities is evident in many places. There is poor linkage between government policies and what actually happens in real life in the communities. While the National Environment Management Authority is in place, it lacks effective on the ground



capacity to monitor compliance. They lack capacity to monitor and enforce discharge standards from industries, chemicals in farms and garbage in urban centres.

As a consequence many environmental abuses go unpunished and many of the penalties given are not effective deterrents. A recent decision to transfer management of forest reserves to central government has had the net result of having large chunks of hitherto reserve forests cut down. In this process, valuable indigenous trees, some with unresearched value yet, are systematically disappearing thus threatening the entire biodiversity in the lake region.

## **2.5 Forests**

The expanding population in the Lake Victoria basin and its catchments has put immense pressure on the forest resources in the region. This has included clearing land for settlements and for agriculture. During this project whole areas that had been forested in the Sigulu Islands were reported to have been cleared in the last five years alone.

Most of the landings sites where fishing communities are found are not serviced with any meaningful and affordable source of alternative energy. This thereby leaves the forests as the most accessible resource.

## **Section B: Social economic aspects of the lake**

### **2.7. Education**

#### **2.7.1 current Situation and trends**

In Uganda, the Lake region has attained an encouraging level of primary school enrolment with rates ranging between 80-90%. The positive change is mainly attributed to implementation of Universal Primary Education (4 children per family, 2 of which should ideally be girls). Government plans to increase and maintain rates of transition from primary to technical and vocational education by ensuring adequate provision of technical and vocational schools to be done in collaboration with the private sector. There is affirmative action provision of additional 1.5 points for female university entry to counter-balance cultural and social biases against girls.

There are, however, disparities associated with the differences in education resources, competing employment opportunities such as fishing (for boys), (insecurity) and cultural barriers that deny girls education. Despite these threats, gender differentials in school enrolment are presently not significant (particularly in the central region), and literacy levels are steadily increasing nation-wide.

In regards to the adult literacy, there are recent interventions focussed on functional adult literacy, which also entail skills development - under the Poverty Eradication Action Plan.

Literacy levels are steadily increasing nationwide. However, adult and female literacy in Iganga and Mayuge is still among the lowest. Within the lake basin, the central

districts of Masaka and Rakai are among the most poorly served in terms of pupils per teacher.

School drop out is a key challenge to the sector. In the lake basin of Uganda, by 2000, the Eastern region had the highest levels of post primary dropout rates. Overall, the main reason for school drop out is the high costs especially of secondary education. Secondary education is yet to be catered for. Although not very significant, fishing influence on school dropout is highest in the Eastern region.

HIV/AIDS has had its toll on education, affecting students, parents/guardians, teachers and policy makers. In addition to school dropout, other effects are absenteeism, orphans feeling despondent, financially deprived – affect their performance.

### **2.7.2 Effects and Impacts of current education trends**

Despite the achievements, the sector still faces diverse challenges. Most are chiefly due to unexpected high enrolment. These are: deterioration or lack of proper physical infrastructure – shortage of classrooms, shortage of teachers, textbooks, and learning materials. Teachers are poorly facilitated and many are untrained. Owing to low salaries, many teachers work in more than one school.

Despite interventions, more girls still drop out at upper primary levels and secondary levels due to early marriages, sexual harassment in schools, pregnancy and parental preference for boys' education, the demand for economic (boys inclusive) and domestic labour. The high cost of secondary education is main cause of drop out.

The sector has challenges of ensuring access, while raising the quality of education; recruitment of qualified teachers and adequately paying them; and ensuring availability and access to textbooks. The challenge again is keeping enrolled children in schools, who are constrained by extra costs such as provision of lunches.

### **2.7.3 Consequences for Specific Stakeholder Interests**

There is concern over UPE compromising the quality of output in terms of quality of students. Quality and sustainable results require substantial resource commitment. UPE has promise for attainment of higher literacy rates, and address the challenge of ignorance. However, the program is likely to stretch government resources. Presently, there is heavy reliance on donor funding.

Children of relatively well to do parents are being shifted out of the so-called UPE schools to privately owned schools, a thriving business for entrepreneurial teachers. So, if quality is compromised, it will be the children of the poor to be affected. Hence the more need for sustainable political and resource commitment.

Owing to the high cost of education at secondary, university and tertiary level with limited government sponsorship, children of the poor are less likely to get admitted,

given the fact that the quality of education they get is poorer. Children from poor families are additionally affected by a diversity of cultural and domestic related constraints that limit their performance. Education used to provide the poor with opportunity for upward social mobility. This hope has become an illusion, unless there are interventions at post primary levels. For the majority among the poor, the planned emphasis on increment and maintenance of rates of transition from primary to technical and vocational education with emphasis on functional and marketable skills development is a viable alternative.



### **3. Threats to the well being of lake Victoria and their impacts**

This chapter examines the various trends and issues currently pausing major threats to the lake and its health. The chapter further examines the effect and consequences each of these ultimately has on the lake in general and on specific stakeholders. It is these negative effects that have to be ameliorated if the future health of the lake and its basin are to be sustained.

#### **3.1 Pollution**

Lake Victoria is current faced with one of the highest pollution rates among water bodies in the world. This high pollution rate arises form a wide range of causes. These include rapid and unplanned urbanisation around the lake, poor and ineffective policy formulation and implementation as well as negative attitudes harboured people that use the lake such as “Enyanja tejjula”<sup>12</sup> That no amount of pollutant can manage to pollute the lake.

Unplanned and un regulated urban and industrial growth leading to immense pollution with industrial wastes freely entering water bodies yet the toxic wastes there of may have far reaching effects.

Bad fishing habits such as fish poisoning and beech seining, which arise, from poor enforcement of laws and degenerated moral standards. Bad fishing habits such as fish poisoning and beech seining, which arise, from poor enforcement of laws and degenerated moral standards.

#### **3.2 High population increase**

Uganda has a situation of high prevalence of extreme poverty alongside high population increase. The fertility rate of about 7 children is among the highest even for developing countries. The population growth rate has increased from 2.5% in 2000 to an astounding 3.4% in 2002 and is projected to increase to more than 101 million people in 50 years, unless there are serious interventions. . Contraceptive use is low despite increased awareness

The lake Victoria basin districts are amongst the most densely populated. Some of the fastest growing are: Kalangala, Wakiso and Kiboga in central Uganda, Bugiri in the East and Kabale in the southwest. The basin is the most developed part of the country; its urban centres and the existence of commercial plantations make it a destination for migrant populations in search of employment and abode.

Civil wars, political insecurity in (Uganda and) neighbouring countries such as Rwanda have led to both internal and external migration. The central attracts more migrations mainly in search for land, settlement and employment. In addition, the absence of basic infrastructure, industries and food scarcity in many rural areas and other regions are the driving force behind youth migration to urban areas. The most densely populated districts of Kabale, Kisoro, Rukungiri, Mbale, and Busia are the main sources of migrants. Within the basin, residential and regional variations exist.

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<sup>12</sup> This is a quotation from one of the fisher folk at community level it is drawn from Luganda meaning that no matter how much the lake is polluted it will never be over whelmed by the pollution.

While urban areas, the central region have lower fertility rates, the Eastern region has very high fertility rates.

High fertility is associated with high mortality rates (88/1000 in Uganda), low levels of education and poverty particularly on the part of women, high value attached to children as a way of perpetuating ones' name, and labour intensive sources of income. Contraceptive use prevalence at 23% is still low, lowest in the East (15%), despite high levels of awareness of contraception; hence, contributing to high fertility.

Poverty is an underlying factor not only for poor quality of life but high fertility too. Despite the decline from 56% to 35%, inequitable income distribution (on regional basis) still applies and household incomes for many remain low. While there has been a decline in total fertility rates in urban, central and western regions, fertility in the Eastern region, which reveals increasing poverty, remains constant at 7.4.

### **3.2.2 Impacts and effects of high population**

High population growth through high fertility and migration has implications for service delivery and resource conservation. The rapid population growth is not really matched with rapid socio-economic growth, making it difficult for government to meet its population's needs in the areas of health education, agriculture, infrastructure, housing, water and sanitation, thus retarding socio-economic progress. In Kampala area, migration due to economic pressure and landlessness contributes to the expansion of slums in wetland flood prone areas with major housing and sanitation problems. Unemployment is high in urban areas and slums are increasing. Fifty eight percent of the households in Kampala live in one-room dwellings.

Increased population growth is already increasing pressure for arable land, is likely to impinge on the forest cover, and to exacerbate the burden of public service delivery.

Population growth has and will continue to increase demand for forest products, use of forestland and cropland. In the quest for arable land, forested areas on private land are likely to be degraded unless there are interventions with a shift toward modernisation of agriculture or alternative employment that exerts less pressure on natural resources. Increase in population also means increased land fragmentation

The demand for woody biomass for fuel is likely to affect tree cover unless there are adaptations to alternative fuel sources, or interventions in population growth; presently, consumption is not sustainable. In essence, the demand for more agriculture land could wipe out the rest of land cover types. There is also a possibility of giving up agriculture due to land deprivation or unproductiveness. This however, would mean rural-urban migration.

The systems are already overwhelmed by increasing morbidity with the 'diseases of poverty', especially HIV/AIDS and its repercussions, plus poverty and inability to pay for services. Population increase would mean the following for service delivery:

- In the education sector, improving infrastructure and the quality of education in the face of massive numbers of children is still a problem that would require massive investments in infrastructure, personnel and scholastic inputs.

- In the health sector, attainment of good health for all by delivery of the minimum quality health package through provision of adequate health infrastructure, health personnel, facilities and equipment is and will be significantly undermined by rapid population growth, since resources required will not match the demand. High population increase could result in significant resource investment, stressing of the economy, or compromising quality of services.
- Increase in population will exacerbate poor housing conditions, water and sanitation services for the poor, which would in turn affect their health.
- In terms of employment, rapid population growth does not allow for savings and investment in industries that would provide the required jobs. Presently, job creation is slow, leading to unemployment.
- Economic growth is undermined by high population growth. High fertility will constrain ability to eradicate poverty by 2017 as planned.

### **3.2.3 Consequences for Specific stakeholder Interests**

High population growth is likely to continue exerting pressure on natural resources and service delivery, in a context of poverty, thus, retarding progress in development. With population growth, and resultant resource scarcity, already marginalized groups bear the brunt.

Poor people with no land rights are likely to be pushed to the margins. Many landless persons have migrated to other parts of the country, leading to ethnic tensions (for instance in Kibale district). The majority is not willing to relocate away from their extended families. With a population growth rate of 3.4% and the low urbanization of (15% - the lowest in the riparian countries) the pressure for land is likely increase tremendously. There are/were also cases of encroachment of protected forests in densely populated areas of the lakeshore (Mayuge district and in Western Uganda).

Apart from the poor, women (and children) owing to their marginalized positions in society are disproportionately affected by negative consequences of population increase. Unless affirmative action is accompanied by resource commitment and monitoring, in the face of resource scarcity, women (and children) are likely to have less access to resources and services.

Whereas population increase facilitates availability of cheap labor to industry, and provides ready market for products (assuming that people will have the ability to pay), the resultant poverty, which leads to crime and insecurity, could scare off investors. This affects economic development and the countries capacity to address employment and poverty issues.

### **3.3 Health including HIV/AIDS**

Health is a priority sector for government and the population of Uganda. Significant progress has been registered in the sector. This is attributed to increased resource allocation to the health sector, policy shift towards primary health care with emphasis

on disease preventive measures (among other factors). Physical access to health services has improved. Government authorized training and recruitment of more health workers to improve the quality of services; and a minimum health package is in place.

However, between 1995 and 2000, some health indicators show a decline: IMR, U5MR, life expectancy and stunting among children increased, while full immunization coverage and life expectancy decreased. MMR more or less remained constant. Health services are still inequitably distributed with an urban bias. Lack of equipment, drugs, and well-trained personnel in rural units abound as major constraints.

The majority of staff in the sector earn meagre salaries which forces them to work in several places, including private practice where drugs intended for public units are reputed to leak. The still poor (mainly economic) access to health services leads to widespread self-medication and drugs misuse among the population. Access to health services dramatically increased with the suspension of cost sharing and then declined owing to lack of required inputs.

Communicable diseases, such as HIV/AIDS, poor nutrition and hygiene, inadequate medical services particularly in rural areas are some of the factors that contribute significantly to the burden of disease. High IMR is attributed to poor nutrition, low immunization rates, and high HIV/AIDS prevalence. This is particularly the case in Mbarara area.

According to recent studies, malaria is on the increase both in the entire lake basin and in Uganda from 25% in 1995 to 45.5% in 2000. The long, hot wet season of the basin makes the area an ideal breeding ground for malaria-carrying mosquitoes. The malaria situation is exacerbated by poor case management partly due to self-medication (48% nationally). This is partly due to limited economic access to proper health care, low levels of awareness and the impact of rapid urbanisation without adequate public health improvement measures and strategies being adopted. Other diseases with increasing prevalence are acute respiratory infections, tuberculosis, intestinal worms, skin diseases and cholera.

### **3.3.1 Impacts and effects of current general health situation**

- ❖ Heavy expenditures on health and yet the incomes are low.
- ❖ Low school attendance.
- ❖ Persistent absence from work leading to low productivity and poverty.
- ❖ Limited access to health services leading to poor case management.
- ❖ Emergences of resistant diseases strains and hence increase in morbidity and mortality.

### **3.3.2 Consequences**

Since health outcomes depend on incomes, education, information, access to health services, water supply and sanitation, the poor are most severely affected. In urban

areas, poor people resident in slum areas (migrants inclusive) comprise the majority among hospital out and in patients, mainly presenting communicable diseases. Rural areas where health facilities are scarce and ability to access services limited are more severely affected by diseases. These also have the highest morbidity and mortality rates. Women and children are most affected by diseases owing to physiological vulnerability and consequences of limited access to and control of basic resources.

### **3.3.3 HIV/AIDS**

After malaria, HIV/AIDS is the next most serious health problem in the basin. It is now prevalent in both urban and rural areas. Infection rates are highest along major transport routes and around trading centers.

Uganda, however, has registered significant progress in slowing the spread of HIV/AIDS with the prevalence rate nationally declining from 30% in 1991 to 6.1% in 2000. This is attributed to a multi-sectoral approach, strong political commitment and intensive awareness raising.

Districts adjacent to the lake (particularly urban) are still among the most affected by the AIDS pandemic. Presently, sentinel records at main hospitals reveal significant declines. Although the overall gender gap is narrowing, women, particularly younger ones between 15 to 19 years are six times as infected as men in the same age group.

The main contributing factors for the spread of HIV/AIDS are cultural practices such as widow inheritance, polygamy, wife sharing, (married) men's resistance to condom use and the high value attached to children. Risky sexual behaviour especially in urban areas and in contexts of high mobility, anonymity, where extensive sex networks exist is also related factors widespread. High poverty levels and economic dependence, inadequate life and negotiation skills have made young girls and women in general most vulnerable.

### **3.3.4 Effects and Impacts of health and HIV /AIDS**

HIV/AIDS is a development issue. Having its toll on the economically productive sections of the population results into high dependence and poverty. The disease worsens or deepens poverty and induces it. Traditional support systems, such as the extended family, are failing to cope with the ever-increasing HIV orphans. In the agriculture sector, morbidity and mortality due to AIDS has resulted into decline in the scope of cultivation.

Shifting to cultivation of less labour demanding food crops owing to time and resources spent on care and related social activities. This results in low yields, food insecurity, and sale of property to care for the sick. Households are strongly hit by the loss of income earners, loss of savings – caring for the sick and covering funerals and support destitute family members. HIV/AIDS also leads to school drop out

(particularly of girls) due to lack of school fees and related requirements or the need to care for the sick. Deterioration in food production affects nutrition, where food consumption may drop by as much as 15% in the most poor households with severely sick or dying adult members.

HIV/AIDS effects are grave and overwhelming in terms of dependence (orphans). Uganda has the highest number of HIV/AIDS orphans in the world (over 1.7 million in 1999). Masaka and Rakai districts have been particularly hard hit; in Rakai about 30% of childbearing population is HIV/AIDS-infected, and approximately 18% of all children have lost at least one parent. HIV/AIDS related morbidity in general is overwhelming the health service sector. Tuberculosis (associated with HIV/AIDS) is highly prevalent, significantly contributing to increase in hospital bed occupancy from 50% in 1990 to 70% in 2000. This is in addition to the high costs of treatment.

The disease has grave impact on the public service. Costs related to sickness and deaths of public servants increased 25 times within 4 years: from 212,157,000 shillings in 1995 to 5,364,857,745 shillings in 1999.

### **3.3.5 Consequences for specific stakeholder interests**

HIV/AIDS has major consequences for quality of life and development. Despite this progress, HIV/AIDS continues to ravage the poor who are put at risk by their economic circumstances. The disease can lead to destitution.

Women, owing to gender based socio-economic marginalization, are not only the most hard hit by the epidemic, but the burden of nursing the sick notoriously falls on them. This is in addition to their role in providing for the household; income earning, domestic work and child-care. The most vulnerable among women are sex workers, young low-income women (young women are six times as infected as men in the age group. Rural women are more at risk from urban men). Soldiers and business people are also among the affected groups. Fishermen are among the most affected owing to their mobility and contact with diverse partners. With declining catches in the artisan fishery sector, female fishmongers are increasingly engaged in sexual activities for the opportunity to buy from the limited supply of available fish.

Orphans, some of whom are infected have become a significant part of the population. Poor populations are overwhelmed by needs for orphans and the sick. Old caretakers, the majority of whom are impoverished are the most affected among caretakers. Some orphans in such situations end up child/teen household heads or as street children. The loss of trained personnel; for instance in the civil servants is detrimental for development. HIV/AIDS has affected the labour force thus hampering socio and economic productivity.

### **3.4 Rapid urbanisation**

With worsening poverty situation in the rural communities, there is increasing rural-urban migration. However the influx of people, especially youths seeking employment in the urban centres, is not matched by availability of employment opportunities.



Instead many young people in towns end up being unemployed and redundant thus leading to increased poverty.

Rural communities do not easily access financial services such as loans and micro credit. This is due to limited coverage of banking and micro finance services and where they exist they offer prohibitive conditions.

### **3.5 Industries**

One of the major challenges that the lake Victoria basin has to contend with is the industrial waste. While industrialisation is perceived as the way to get out of poverty, it on the other hand has been viewed as a major contributing factor in compounding poverty.

Many industries build in wetlands thus severely damaging ecosystems while others lack waste disposal treatment facilities so empty raw wastes in the water bodies. Most of these wastes subsequently find their way into the lake.

### **3.6 Irrational fishing**

Bad fishing habits such as fish poisoning and beech seining are on the increase in Lake Victoria. These arise, from several factors such as poor enforcement of laws, lack of effective monitoring, absence of quality standards and degenerated moral standards.

Bad fishing habits are partly responsible for the declining specie variety in the lake which, if not checked risk depleting the lake of valuable fish stocks.

### **3.7 Species decline and extinction**

Lake Victoria is currently experiencing declining fish catches couple with declining fish species. Many people met during the study expressed their fear that fish is getting fewer all the time. This situation got worse despite the introduction of the high breed Nile perch fish in the seventies.

The situation is worsened by the spiral competition for fish as a result of rapid growth in the number of fish processing factories within the three countries.

There is also declining fish prices and poor data collected on fish catches.

### **3.8 Bad national and regional policies**

Broadly within the riparian countries and Uganda in particular, there is inadequate translation and operationalisation of policies and laws at lower levels. This translates into in lack of awareness by the people of the existence of such laws.



In all three countries pre independence agreements constraining free and productive use of water resources still exist. In the case of Uganda for example use of the Nile river waters for irrigation purposes is highly discouraged and a permanent team of monitors from Egypt is in place in the country to monitor this.

Many local authorities are reluctant to enact and enforce byelaws often sighting fear of losing popularity from their electorates.

Within the regional there is un-harmonised legislation between the three basin countries governing lake Victoria despite the fact that they all consider it an important economic resource. This lack of harmonisation translates into ironical instances where an illegal act in one country is considered ok in the other. A case in point is the catching of immature fish, which while illegal in Uganda is perfectly legal in Kenya.

### **3.9 Gender Issues**

Sustainable development requires maximum and equitable participation of men and women in all spheres of development and sharing to the benefits thereof. Gender, a cross cutting issue, is one of the key bases of marginalization, exclusion and is a critical area of concern in assessing the socio-economic potential and constraints of developing the lake Victoria Basin. While there have been efforts to redress gender imbalances through constitutional provisions and gender responsive policies, laying grounds towards gender equality, full implementation remains a challenge. This is mainly attributed to persistent cultural/religious attitudes and practices. Culture has significant influence on gender relations, roles, and division of resources and sharing of benefits. These practically permeate all sectors and have influence on the quality of life, with implications for production, environmental and natural resource management.

Women in the lake basin are (as else where in Uganda), are consistently worse off in terms of well being, in comparison to men. They are faced with limited access to and control over resources, evidenced for instance, by higher illiteracy and poverty levels.

#### **3.9.1 Present gender situation and future trends**

Uganda is one of the leading Sub Saharan countries with regard to government's commitment to a gender responsive development. Significant progress has been made in addressing gender issues in favour of women, including affirmative action provided for in the constitution. In addition to the Poverty Eradication Action Plan and other facilitating policies, gender issues are being mainstreamed in development programs.

In Uganda Women contribute most of the labour especially in agriculture (80%) but control least of the land or proceeds. Women have limited access to credit, have low levels of education, limited marketable skills, limited participation in formal employment, with low representation in decision making positions, higher levels of poverty, poor health (including their children), where younger women are more susceptible to HIV/AIDS infection than their male counterparts. Some of the cultural practices affecting women in Uganda are: widow inheritance, polygamy, wife sharing,

bride price if restrictive, forced, sometimes adolescent marriages, violence and genital mutilation, plus denial of equal rights to education, health services, work, incomes etc.

Women and the youth generally lack access to and control over productive resources – land, capital, information, forest and other natural resources. Uses of natural resources are gendered where women have rights to renewable use (plant crops, harvest leaves, firewood) and men rights to consumptive use (harvest whole trees, sell land). Women participate less in decision making and sharing of benefits from natural resources. One of the key constraints is limited access to technical education and training, credit, extension information. Extension workers in the sector have not been gender responsive in approach. Additionally Political commitment to addressing gender issues is waning.

### **3.9.2 Legal and policy setting**

The government has instituted a framework to redress gender imbalances. It is aimed at nurturing a society that is both informed and conscious of gender and development issues and concerns. The policy is to guide and direct planning, resource allocation and implementation of programs at all levels.

The goal of the policy is to ensure that gender concerns are mainstreamed in the national development process with a purpose of ensuring improvement of quality of the people, particularly women. Some of the objectives are: ensuring that development plans are gender responsive; redress existing and emerging gender imbalances; ensure participation of both men and women in all spheres of development; promote equal access to and control over economic resources and benefits; and recognition, valuing roles and contributions of women. Gender inequities are also being addressed through Universal Primary Education, adult literacy programs and the overall PEAP program.

The constitution of Uganda provides for full and equal dignity of person for men and women; and

- Provision of opportunities and facilities necessary to enhance women's welfare and enable them realize their full potential and advancement by the state;
- State protection of women and their rights, taking into account their natural maternal function in society;
- Right to equal treatment with men and that right shall include equal opportunities in political, economic and social activities; (on third representation in LG)
- Without prejudice to affirmative action, women shall have affirmative action in redress cultural or historical created imbalances;
- Laws, cultures, customs or traditions which are against the dignity, welfare and interest of women or which undermine their status are prohibited by the constitution.

### **3.9.3 Some of the strategies to achieve the above are**

- ❖ Sensitisation on gender issues at all levels.
- ❖ Ensuring gender responsive development plans at all levels, and sectors in an integrated manner.
- ❖ Advocacy for gender equity at all levels. Currently some of the Uganda government's direct interventions on this issue are evident in the affirmative action of provision for 1/3 women's representation at all levels of local governance and the provision of the 1.5 points for girls to raise their university intake.

### **3.9.4 Impacts and Effects**

Women in Uganda play a major role in natural resource utilization and management for sustainable development. Owing to gender-based marginalization, their access and control over economic related natural resources is minimal. The predominantly male extractive commercial resource use and related degradation has detrimental effects on women. Poor households and especially female-headed households are most vulnerable to increased environmental risks, uncertainty, and insecure entitlements. Poor rural (women) pay the price by spending more time and energy in accessing for instance water, and fuel wood and land for cultivation.

The disadvantaged position of women results in poor quality of life of households where women and children are the most affected. Their low levels of education, awareness, limited control over related resources, result in poor natural resource management.

Owing to trivialization of gender issues, there is not much sustained impact in attitudinal change even in political circles. The ministry of gender marginalized in terms of resource allocation.

### **3.9.5 Consequences for specific stakeholder interests**

Gender based inequities undermine development through wasting of human potential. Women are losing control over household food. All women are affected, but poor, uneducated, rural women; particularly female household heads are most affected. Food security and proper nutrition, in contexts of resource scarcity and competing economic interests are threatened. This threatens food security and affects nutrition especially of children.

Women are also losing out in terms of fish processing and marketing and are in danger of HIV/AIDS infection with HIV/AIDS. Poverty has led to increased stress, malnutrition and ill health (with worst impacts on children) and the transfer of difficulties to the environments in order to subsist.

### **3.10. Water and sanitation**

Availability and safety of water and sanitation have a major bearing on basic survival and on the health of the population, in light of related preventable diseases, which significantly contribute to the burden of disease. Scarcity of (safe) water means increment in women's workload. While water and sanitation are affected by environmental degradation, sanitation in particular affects the environment, including the quality of water, especially in settings of poverty and underdevelopment.

#### **3.10.1 The national water and sanitation situation**

Water and sanitation has improved significantly from 26% in 1991 to 60% in 2000 for water, and 47.6% in 1991 to 85% in 2000 for latrine coverage. The lake districts are some of the least served in terms of population per water source, owing to the high population densities. Many rural people use unprotected sources. Water-borne and water related diseases contribute to 30% of total mortality in Uganda.

Poor sanitation leads to more exposure to diseases like dysentery, diarrhoea and typhoid fever. Poor living and sanitary conditions are also responsible for the high prevalence of parasitic diseases such as malaria, respiratory infections, intestinal worms, acute diarrhoea, skin diseases, and eye infections.

Low latrine coverage is attributed to the high water table, sandy or rocky soils and cultural constraints (particularly the case in Kalangala and Bugiri). The lake is often used for washing, bathing and defecation by fishing communities, thus contaminating the water. In the process, people are also exposed to water borne diseases such as bilharzia, and diarrhoea. Fisher folk have cultural resistance to latrine use. Kampala faces the challenge of ensuring proper sanitation due to population density, particularly in unplanned slums settlements in wetland areas that make basic sanitation difficult. Draining of human waste in streams that eventually drain into the lake is common practice. This is compounded by the fact that degradation of wetlands has reduced their filtration/purification capacities.

Although coverage at national level has improved, the districts of Kalangala, Ntungamo and Mbarara have limited safe water coverage.

#### **3.10.2 Effects and impacts**

Areas with least covered in terms of water and sanitation have higher incidence of the above diseases. In urban areas, the interaction between formal and informal sectors makes other sections of the population vulnerable to such diseases. Contamination of stream and lake water endangers direct water users. Poor sanitation can also affect the quality of fish, and the demand for fish especially for export.

### **3.10.3 Overall Consequences**

If quality of life issues: in this case the disease and nutrition situation, plus water and sanitation issues are not redressed, significant short term and long term impacts on society at large, on state institutions and the affected households are likely to be the result. The permanent effects of stunting, for instance, mean that the affected future adults will not attain their full productive potential. The effects eventually retard economic growth for decades (through related morbidity, mortality and effects on productivity). The poor are the most affected, and among these, women and children.

In Uganda, there are significant remedial interventions especially in the areas of HIV/AIDS and addressing poverty through improvement in basic service delivery, health, primary education and adult literacy programs inclusive. However, unless these are fully implemented and sustained with direct interventions at community and household levels, the situation is likely to turn out as follows: In terms of demographic implications, life expectancy has and will continue declining. More children will be orphaned some of whom will eventually die owing to HIV/AIDS. Increased dependence on elderly people who would have been supported by younger persons, lost to HIV/AIDS. Morbidity due to HIV/AIDS and other communicable diseases will continue stressing/overwhelming health service system. Given the impact of HIV/AIDS, a continuing deterioration in nutritional status of affected populations can be expected. The growing demands of the health sector to fight the death toll, have effects on the financial allocations to other public sectors crucial to poverty alleviation like education, water supply and agricultural extension services. This would have detrimental effects on development and quality of life.

### **3.11 Nutrition**

Nutritional status is indicative of both health and wealth. It is associated with food intake, access to health care, sanitary conditions and to some extent, mothers' education. This makes nutritional status not only an indicator of quality of life, but also a prime indicator of socio-economic development. Some economic activities (production for the market versus subsistence), culturally based eating habits, low incomes, large family sizes, low levels of education (especially of mothers) and limited awareness of proper nutrition, plus the high prevalence of HIV/AIDS and its consequences, negatively influence nutritional status.

Many of the households in the region are quite poor, and have few resources to combat economic threats. In this situation, HIV/AIDS and its consequences compromise the nutritional status of many people. Increased morbidity reduces the labor available within households for livestock keeping, cultivation, and fishing. This reduces household income, impacting negatively on household access to food. In some districts there has been a shift from labour-intensive crops such as matooke, that are of relatively high nutritional value, to other crops such as cassava and sweet potatoes which are of less nutritional value.

The situation is particularly critical for households that have limited financial reserves to bear the costs associated with caring for the sick, and for meeting the burial

expenses. When family members fall sick it is common to sell off livestock to cover the costs of medical care and drugs.

Whereas export promotion of non-traditional crops (mainly food crops such as beans, maize, peas, Soya beans, maize) is aimed at eventual improvement of the well being of the producers, it has nutritional repercussions at household level, especially for women and children. Such food items become more scarce and therefore expensive and less accessible to the poor. The need for cash, usually controlled by male heads, who may not necessarily convert the cash into food, threatens food security at household level. Food is no longer stored for the next season but sold. Men usually take over food crops/products when they become cash crops/products. Hence, women lose control; this has been the case for milk in the Western Uganda. Commercialisation, where individuals can participate as out-growers for agro based industries (of sugarcane, tea) leads to use of choicest land for such cash crops, leaving less productive land for food crops. With expansion of the fish industry, local populations in the basin have less access to fish for consumption. The poor can only afford fish frames. All these compromise the nutritional status of the poor (who are the majority) particularly women and children. Other factors that influence nutrition include: declining yields of food crops in some formerly productive regions, post harvest losses, poor agricultural practices, changing weather and climatic conditions, and declining soil fertility.

Urbanization and increasing affluence have affected nutrition, resulting in obesity, heart disease, diabetes, gout and dental problems, through consumption of higher amounts of energy and fat and less of foods with high fibre and carbohydrates and with less energy expenditure.

### **3.11.1 Effects, Impacts and consequences**

- ❖ Malnutrition especially among children is one of the top killers. Although there are improvements.
- ❖ Stunting estimated at 39% (a slight increase from 1995).
- ❖ Daily calorie supply per capita has more or less remained constant since the 1960s despite other changes
- ❖ Anaemia mainly rampant among women.
- ❖ Malnutrition is an underlying cause of child mortality. It contributes approximately 60% of child the deaths in Uganda.

Malnourished women are likely to have children with low birth weights, malnourished children. Additionally, there are risks in delivery, sometimes leading to maternal mortality. Malnourishment affects a person's physical mental development, with repercussions in adulthood. Malnourishment also leads to more susceptibility to diseases and leads to less productivity. Poor persons in general, women, and children are most affected. Among them, fishing communities and communities involved in out-growers schemes are important stakeholders whose situation needs more examination for future impacts.



## **4. Current recommended strategies to curb further deterioration of the lake and its catchment.**

### **4.1 Sustainable Development & Integrated Management of Lake Victoria Basin**

Sustainable development and integrated management of the Lake Victoria Basin is greatly affected by our understanding of the inter-linkages between the health of ecosystems and human populations, and by the employment opportunities and poverty prevailing in societies (including issues of income generation and health). One of the greatest drivers of poverty is environmental degradation. A healthy future for the Lake Victoria Basin demands that ways be found to solve this problem.

A way to understand the interrelationships in the basin is to consider:

- a) the condition, present state of, and recent change in various sectors (for instance, agricultural methods and technologies),
- b) the effects of change (for instance, the use of pesticides in agriculture directly affects the quality of downstream water resources and indirectly affects human health),
- c) the consequences for specific groups (for instance, poor water quality leads to human illness and lack of health, to which the poor may be most vulnerable),
- d) suitable policies, management principles and regulations to address the problems in a).

Various approaches have been suggested to cope with the opportunities and problems that exist in the Lake Victoria Basin. Among the priority issues for sustainable development and integrated basin management are:

- i) The impact of environmental degradation on poverty, and that of poverty on the environment
- ii) The impact of agricultural development and land use changes on forest cover, wetlands and other shoreline habitats for humans and animal life
- iii) The impact of deforestation and clear cutting on incidence of major floods (causing damage to settlements, property and civil infrastructure)
- iv) The impact of the introduction of Nile Perch and water hyacinth on Lake Victoria upon fish species diversity, and consequent impacts on local communities catching fish for local consumption
- v) The impacts on water quality deterioration on supply, sanitation and human health
- vi) The impact and potential of tourism for economic growth, wildlife survival and nature conservation
- vii) The cascading effect of HIV/AIDS and malaria on poverty and consequent socio-economic stress
- viii) The potential opportunities that lie in harmonization of institutional, policy and governance measures within the Basin for securing and strengthening economic growth, social welfare and a healthy environment for all.



## **4.2 Situation, Changes and Effects**

Economic, social and environmental systems in the lake basin have developed and transformed in different ways over the past. Given proper principles of integrated management, some of the opportunities to be realised from sustainable development of the basin's vast physical, economic and human resources are given under:

- i) Most poor people in the Lake Victoria Basin live in marginal areas that are already among the most heavily degraded, or most prone to risk from environmental destabilisation -- such as settlements in flood prone areas or areas without proper sanitation services. Both are linked to a lack of environmental and social services such as safe water supply, water quality and regulation to conserve water resources. Consequently, the resource rights of the poor to environmental resources, and their capacity to manage the local environment, need to be strengthened. This aim forms the core of this project.
- ii) Large-scale human economic activities have altered environments in the Lake Basin, affecting the livelihoods of local people. Wetlands are under particular pressure. Wetlands provide direct benefit to local people (rice crop production, dry weather grazing land, groundwater supply, and raw materials for crafts) as well as serve to recycle nutrients. The goods and services wetlands provide will be sustained through measures for integrated management, leading to a healthy and sufficient resource base for lake communities that depend on them.
- iii) Intensive land use and deforestation around the lake catchment has resulted in changes in flood patterns, increasing peak flood flows and periodically destroying settlements, property and infrastructure. Organised afforestation, protection of riparian forest corridors in the catchment, and regulation of settlements are amongst the measures that can substantially reduce this havoc, as well as provide widespread opportunities for human survival and a better life.
- iv) The introduction of the Nile Perch some time ago was one of several interactive factors that resulted in decreased fish species in the lake. Today the Nile Perch industry is a commercially important private industry, but the reduced diversity of indigenous fish species has led to a reduction of the resources available to lakeshore communities for survival. Poverty has increased and health conditions have deteriorated among the majority of these communities. Balancing the needs of commercial industries and local communities is a complex problem, and require innovative measures such as increased participation in commercial fish processing, natural or farmed breeding of native fish, as well as strengthening of related awareness in fishing communities.
- v) Although abundant water hyacinth was a major problem in the 80s and most of the 90s, it has now been reduced by over 80% following biological control, mechanical removal, manual harvesting and replacement by native species. This success is especially evident in Uganda and Tanzania. Although some water hyacinth is still prevalent on the Lake, the coordinated solution being found for this problem creates hope and capacity to overcome other similar problems.

- vi) Over the years, both water quantity and quality have undergone increased stress in the basin due to over extraction, diversion, destruction of natural filtering mechanisms, and release of agricultural and industrial chemicals. This decrease in water quantity and quality acts as a major constraint for the sustained development of other lake resources. The quality of water resources needs to be enhanced through integrated basin management, balanced and harmonized regulation, building popular awareness, and balanced regimes of property rights and rehabilitation, amongst others.
- vii) Although tourism has yet to reach its full potential, it has contributed substantially to socio-economic growth and resource conservation in Kenya, Tanzania and Uganda. Sustained tourism development can provide opportunities for economic growth and social welfare, but needs to be achieved in ways that respect and preserve the natural and cultural endowment on which tourism is based.
- viii) HIV/AIDS and malaria are linked to environmental degradation and poverty. HIV/AIDS has increased rapidly in the region, although Uganda achieved a reduction due to sound policies and awareness programs. The Ugandan approach may create hope for both Kenya and Tanzania. If this is matched by sound environmental restoration and reduction of poverty, there is no doubt that human health will improve substantially over the region.
- ix) Institutions and policies have varied and diverged in the countries of the Lake Victoria Basin. A sustained effort at harmonization and strengthening relations between Kenya, Uganda and Tanzania will in time help to cope with the many problems described here, thus enabling people to develop their full potential for leading healthy and satisfactory lives.

### **4.3 Policy**

Government plans to put in place strong reproductive and family planning programs that address issues of quality and access, increase education and economic opportunities for women and promote manageable family size concept. Bilateral and multilateral support in the sector is significant (MFPED, 2001). The quality of life issues are being addressed through PEAP.

R- should aim at redistributive measures to narrow the gap between the rich and poor. Fiscal policies need to be continuously reviewed with the aim of wealth redistribution.

To achieve high quality of life, there is need for:

- Strong population programs which address reproductive health and family planning
- Increased educational and economic opportunities especially for women
- Promotion of a manageable family size concept
- Provision of appropriate services to satisfy unmet need for family planning
- Increased resources for quality and accessible family planning services.

## 5. The proposed National vision for lake Victoria

### 5.1 The National vision.

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||| **“A Lake Victoria Basin, which is well planned and managed providing**  
||| **sustainable benefits, with a prosperous population meeting their**  
||| **development and livelihood needs without depleting the natural**  
||| **resources and degrading the environment”.**  
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The vision statement was developed and adopted by all workshop participants as one that broadly expresses and represents both the national and individual stakeholder aspirations in regards to the lake Victoria basin development in the next fifteen years.

The indicators proposed that will show that the vision is being attained were:

- Health index (reduction in disease incidences and easier access to health services)
- Wealth Index- (Increased individual and household per capita income and increased GDP)
- Increased/ improved literacy rates
- Accessible safe clean water
- Increased wetlands and forest cover

The vision is guided by the following six overriding principles

- Good governance.
- Wealth
- Education
- Proper planning
- Equity
- Self reliance

To achieve the vision, priority strategies were set based on each of the five themes. These are summarised in the following tables. And they summarise the Uganda Vision and strategies for Lake Victoria and its basin for the fifteen years 2003-2018

## 5.2 The Priorities and strategies set against the respective themes

National priorities were set against each of the themes basing on an analysis of the current situation and desired future. Also developed were indicators for purposes of monitoring the progress toward achieving the strategies. These are variously summarised in the table below.

### Ecology and environment

<b>Current situation/ issues</b>	<b>Desired future</b>	<b>Priority strategies</b>	<b>Indicators</b>
Poor attitudes such as “Enyanja tejjula” <sup>13</sup> That no amount of pollutant can manage to pollute the lake.	Positive attitudes among the people, which would then govern their behaviour towards ecological issues. Increased reliability on domestic sources of water	Community sensitisation and awareness on issues of the environment.	Increased percentage of communities participating in prevention of eco system pollution. Number of domestic water points protected. Reduction in % of pollution loads.
Unplanned and un regulated urban and industrial growth leading to immense pollution with industrial wastes freely entering water bodies yet the toxic wastes there of may have far reaching effects.	Well planned properly located industries and factories where pollution levels are well monitored.	Popularising and enforcement of existing laws.	Improved water quality Number of industries complying with set environmental and legal provisions. Number of byelaws enacted and enforced.
Bad fishing habits such as fish poisoning and beech seining, which arise, from poor enforcement of laws and degenerated moral standards. Bad fishing habits such as fish poisoning and beech seining, which arise, from poor enforcement of laws and degenerated moral standards.	Increase in number of fish species Fish abundance Appropriate fishing methods	Sensitisation of all stakeholders. Increased co management Enforcement by all stakeholders	Increased catches Increased incomes. Number of communities involved in enforcement Reduction in culprits prosecuted.

<sup>13</sup> This is a quotation from one of the fisher folk at community level it is drawn from Luganda meaning that no matter how much the lake is polluted it will never be overwhelmed by the pollution.

<b>Natural resource Utilisation</b>			
<b>Current Situation</b>	<b>Desired Future</b>	<b>Priority Strategies</b>	<b>Indicators</b>
<p>On water Under utilisation of water resources for economic development such as irrigation, transport and leisure. Unavailability of safe clean water and diminishing safety of existing sources due to pollution and other human activity.</p>	<p>A fuller utilisation of water resources. Water resources that contribute to economic development. Increased reliability on domestic sources of water.</p>	<p><b>Reform legal framework that impose unrealistic limitations/restrictions to the utilisation of the resources. Legal frameworks entered during colonial days.</b> Design and promote appropriate technologies for water supply. Ensure that all water is treated before it enters the lake.</p>	<p><b>Number of laws governing water resources updated.</b> Number of irrigation schemes started. Appropriate technologies in place and being applied. Number of domestic water points protected. Percentage of people accessing safe clean water. Reduction in water bone diseases.</p>
<p><b>On agriculture and forestry</b> Declining land productivity. Declining forest resources Predominantly subsistence farming Declining bio diversity</p>	<p><b>On agriculture and forestry</b> Proper land use and better-planned farming. Fertile soils Afforestation.</p>	<p>On agriculture and forestry Promote organic farming Tree planting. Alternatives to charcoal and firewood. Enact favourable laws and byelaws. Formulate a national land use policy.</p>	<p>On agriculture and forestry Adoption of organic farming. Land policy implemented Increase in percentage of households using energy saving technologies.</p>
<p>On fisheries Declining fish catches, declining fish species, low fish prices and poor data collected on fish catches.</p>	<p>On fisheries <b>Increased and sustainable fish catches</b> <b>Increased fish species.</b> <b>Improved marketing of fish</b> <b>Empowered beach management units.</b></p>	<p>On fisheries Restock satellite lakes. Encourage formation of fisher folk groups and income generating activities Formation and enforcement of strong fishing regulations. Gazetting landing sites Linking communities to markets. Promoting fish farming. Establishing fish breeding centres.</p>	<p>On fisheries Increased and sustainable fish catch Recovery of fish species. Availability of fisheries statistics. Improved quality and markets. Number of landing sites under active beach management units.</p>

On Wild life, marine and tourism Marine tourism not exploited and was not even given priority by LVEMP. There is limited wildlife farming taking place	On Wild life, marine and tourism Marine tourism potential exploited. Increased wild life farming. Control of vermin and problem animals.	On Wild life, marine and tourism Identify suitable areas for wild life and marine tourism. Market marine based eco tourism. Develop relevant infrastructure to promote tourism.	On Wild life, marine and tourism Number of areas gazetted for marine tourism. Number of tourists. Number of tourist sites accessed.
On mining Poor mining methods and under utilisation of mineral resources.	On mining Viable mining sector	On mining Exploit mineral resource. Encourage investment in the sector	On mining Increased internal and external earning from mineral resources and increased mining activity
<b>Technical Infrastructure</b>			
<b>Current Situation</b>	<b>Desired Future</b>	<b>Priority Strategies</b>	<b>Indicators</b>
Poor feeder road networks. Poor water and road transport. Lack of physical planning- un planned settlements (slums land sites and towns) Poor utility services such as telephone and water and electricity in both rural and urban centres.	<b>All weather roads.</b> Well developed water and road transport. Physical planning strengthened. Efficient utility systems such as electricity in place.	<b>Promote community participation in road maintenance.</b>	<b>Water transport maps</b> Increased percentage of surface roads in kilometres.
Urban based economy Increasing rural-urban migration leading to unemployment. Limited coverage of banking services and micro finance with prohibitive conditions. Limited land for urban and commercial farming.	Urban based economy Increased employment opportunities in both rural and urban centres. More banking and micro-finance institutions operating at affordable rates.	Urban based economy Develop and extend infrastructure to rural places. Gazetted land for commercial farming. Strengthen urban planning and enforce appropriate regulations. Encourage private sector investment in micro finance projects.	Urban based economy More employment opportunities in both rural and urban places. Number of people accessing credit. Percentage of people practicing commercial urban farming.



<p>On Industries Many industries build in wetlands lacking waste disposal treatment facilities so empty raw wastes in the water bodies. Very few properly built landing sites Poor infrastructure</p>	<p>On Industries. No more industries located in wetlands. Increase in publicly owned landing sites</p>	<p>On Industries Enforcement of laws and regulations. Government to build landing sites. Regulation, monitoring and de registration of industries operating in wetlands and lake shores.</p>	<p>On Industries Acreage of wetland protected from encroachment. Landing sites under beach management. Percentage increase in landing sites.</p>
<p>Poverty alleviation Multiple taxation on agricultural products. Lack of revenue collection centres in the islands. High interest rates. High vulnerability of farming Wide spread poverty. Poverty alleviation programs do not reach the grassroots. Spiral unemployment.</p>	<p>Poverty alleviation Fair taxation. Accessible revenue collection centres Affordable interest rates. Insurance policies in place for farming business. Increased household incomes. Access to credit.</p>	<p>Poverty alleviation Participatory revision of taxation policies through wider consultation with grassroots people. Establish revenue collection centres in the islands. Regulate the operations of micro finance institutions</p>	<p>Poverty alleviation Reduced percentage of households below poverty line. Increase in percentage of people in gainful employment. Increase in percentage of local government revenue. Increase in percentage of crop yield.</p>
<p>Health and social services  Inadequate health facilities. Deliveries handled at home or along the way to health units by un qualified staff. High motility and morbidity rates Poor sanitation and hygiene. Poor nutrition.</p>	<p>Health and social services All maternal deliveries handled by qualified health workers. Adequate referral systems in place. Reduced mortality and morbidity rates. Proper sanitation at household level. Higher life expectancy.</p>	<p>Health and social services Sensitisation of people and provision of ambulances and communication equipment Nutrition awareness.</p>	<p>Health and social services Reduction in percentage of reported maternal mortality rates. Reduction in percentage of reported infant mortality rates. Increased doctor to patient ratios. Increased nurse to patient ratio. Increased percentage of water points with clean and safe water. Reduced percentage of HIV/AIDS</p>
<p>Education and training.  Inadequate facilities for special needs education. Poor education standards in rural</p>	<p>Education and training. Schools with facilities for special needs education. Increased access to education by disadvantaged children such as</p>	<p>Education and training. Investment in quality education. Increased childcare and parental support.</p>	<p>Education and training. Increased percentage of disabled children accessing education. Reduction in percentage of enrolled girl children dropping out of school.</p>

schools. High rates of school dropout for girl children. Limited access to education by orphans	orphans. High education standards in rural schools. More girl children retained in schools.		Due to pregnancy and forced marriages. Increased percentage of qualified people taking up employment. Reduction in total school drop outs. Increase in student to teacher ratio.
<b>Social and demographic conditions</b>			
<b>Current Situation</b>	<b>Desired Future</b>	<b>Priority Strategies</b>	<b>Indicators</b>
High population growth and limited resources. Lack of awareness. Polygamy, early marriages and negative attitudes toward family planning. Rape, defilement and pre mature pregnancies and forced marriages. Immigrations within districts resulting into land disputes and problems of settlements.	Managed and planned population Promotion of small manageable family sizes. Changing marriage practices Curb defilement, rape and pre mature pregnancies A stable nation.	Sensitise and encourage family planning and child spacing practices Offer reproductive health services. Discourage polygamy and enforce laws on defilement. Implement child rights statute and human rights. Avoid internal and external wars Restrict immigration	Increased percentage of family planning facilities Increased percentage of users of family planning services.
<b>Governance policies and Institutions</b>			
<b>Current Situation</b>	<b>Desired Future</b>	<b>Priority Strategies</b>	<b>Indicators</b>
On decentralisation and participation Poor human resource capacities. Inadequate tooling at lower local government levels.  Low levels of literacy at community	On decentralisation and participation More financial decentralisation and adequate tooling at the local government level.  Appropriate legal frameworks	On decentralisation and participation Review existing laws and update them in respect to financial decentralisation.  Promote grassroots functional adult	On decentralisation and participation Increase in the number of laws that provide for resource sharing between local authorities and central government. Increase in the percentage of local

<p>levels that inhibits community level capacities and participation. No streamlined laws that rationalise sharing resources between central and local governments.</p>	<p>supporting decentralisation and resource sharing. Involvement of communities in bottom up participatory planning and budgeting .</p>	<p>literacy programs. Promote community based participatory planning and budgeting.</p>	<p>governments utilising bottom up planning approaches.</p>
<p>On gender Inadequate targeted community development programs for Women and youth.</p>	<p>On gender Targeted programs in place and implemented</p>	<p>On gender Design and implement development programs that target specific sectors of the community.</p>	<p>On gender Increased percentage of youth and women actively participating in community development programs.</p>
<p>On NGOs and Civil society. Increasing emergency of NGOs and CSOs as mechanisms that are promoting developing. Inadequate feedback on agricultural and environmental policy from the centre to lower levels. Inadequate collaboration between the local government and NGOs and between NGOs often leading to duplication of activities and waste of resources. NGOs have poor phase out strategies often leading to a breakdown in local systems.</p>	<p>On NGOs and Civil society Increased partnerships among NGOs, CSOs and Government Uniform distribution of NGOs/CBOs Appropriate feedback mechanisms on policy formulation, dissemination and reviews Improved collaboration and networking among NGOs and between NGOs and government both local and central. Joint planning between NGOs and local governments.</p>	<p>On NGOs and Civil society Formation of effective NGO fora. Increasing monitoring of NGOs Joint planning between NGOs and local government authorities.</p>	<p>On NGOs and Civil society Increase in the percentage of registered NGOs and other CSO groups participating and contributing in the bottom-up participatory planning and budgeting process of local governments.</p>
<p>On legislative and policy barriers. Inadequate translation and operationalisation of policies and laws at lower levels Pre independence agreements constraining free and productive use of water resources. Reluctance to enact and enforce byelaws by local authorities. Un-harmonised legislation between the three basin countries e.g. on fishing and settlement</p>	<p>On legislative and policy barriers. Improved understanding and ability to implement and comply with policies and laws in place. Review and revise pre independence agreements. Local authorities enact appropriate byelaws.</p>	<p>On legislative and policy barriers Revise amend and harmonise existing obsolete laws Sensitise communities and local authorities to enact appropriate byelaws.</p>	<p>On legislative and policy barriers Increased percentage of local authorities with appropriately updated byelaws. Increased number of revised and harmonised laws. Percentage increase in adherence to laws, procedures and rules and regulations..</p>

### **5.3 Implications of the prioritisation at National level**

Broadly in Uganda, people vision the future as offering better prospects for like. The visioning process at all levels reveals that people have hope that things can change.

In addition people tended to believe that the promoting participation of all people was central to the success of whatever intervention is made. For instance at community level, achieving the future was seen as an outcome of concerted efforts of every body. People were prepared to do things differently but they expect that other actors such as government also change how they their work.

Several issues were raised and seen as critical to actualising the vision. These issues are outlined below and will need continued reflection within the country and at the regional level. The issues are outlined below.

#### **5.3.1 Harmonisation of laws and regulations**

- (i) Within the country, the revenue sharing legislation between the national and local governments must be put in place. If not local authorities in order to raise revenue will continue to encourage all types of enterprises including those that have a negative effect on the environment.
- (ii) There will be need at national and regional level to harmonise rules and regulations. Both at national and district level stakeholders pointed out contradicting regulations which subsequently hampered the manner in which the lake was used in the three countries. One such example sighted in this regard is the fact that while in Uganda it is illegal to harvest immature fish, in Kenya no fish is illegal and therefore any type fish of whatever age is sold freely.
- (iii) Review current national and regional laws and regulations to asses their relevance and adequacy.
- (iv) There are standing cooperation protocols, some of them as old as pre independence that has run out of relevance. Such protocols include the one that regulates water outflows into the river Nile. Such laws or packs stand in the way of attaining the vision in some respects. Repealing or updating such protocols should be a cardinal objective of the riparian countries.
- (v) There needs to be a common law on crime and criminals to avoid a situation where one commits a crime in one country but finds sanctuary in the other.

### **5.3.2 Other issues that need national attention**

- The issues of conflict arose as another area that needs to be addressed. The community and district processes all pre supposed that everything was in harmony and if each person's vision is accommodated then things will be fine. However the fact that Lake Victoria is a resource implies that there are many people who are interested in it. Such interest abounds in conflict and mechanisms need to be identified to manage the conflict process.
- There are mushrooming fish industries in all three countries. What mechanisms are in place to control/ regulate this? There is need within the three countries to establish guidelines for co-operate responsibility to the lake from these industries.
- The three countries should explore the possibility of certifying lake Victoria collectively. Thus fishing and other lake related activities would be collectively certified by the three countries. In a way this will ensure broadly agreed sustainability use of the resources and hence sustainable benefits.
- The spirit of increased partnership between NGOs and other NGOs as well as between government and NGOs needs to be nurtured in view of the broad aspirations of the vision. None of the above can achieve this alone.
- A vision for conflict management should equally be developed especially since the scope of conflict is bound to increase with increased cooperation and freedom of movement in the three countries.
- The management of lake Victoria should be a fraternity between private sector, civil society and the government. This will broaden ownership and responsibility and will also make available more investment resources.

## **6 Concluding remarks**

There are several outputs from this project, community and district reports that need to be studied together. Some of these reports are being finalised by the facilitating NGOs that led the process at district level. This report should therefore be read along with those other reports in order to get a full picture of the entire vision process.

Evidently the individuals and institutions that have been actively involved with process especially the NTF, have generated a wealth of knowledge along the way. This Knowledge should not be let to die at the end of this process. Instead these individuals should be utilised to continue informing subsequent outcomes and interventions.

While at the community and district level the process was based on stakeholder perceptions interests and aspirations about the future, at national level the process though broadly the same tended to focus more on key themes. Therefore because of potential misrepresentation that can arise out of this, it is necessary to facilitate an in-country feed back process through which individual stakeholders will be helped to see how their respective interests and concerns are now catered for in a national vision.

Additional to the above, the same feedback should be made to cover the other Lake Victoria basin districts that did not get a chance to participate at the initial stage during the visioning process. This will be an important step in spreading ownership and enlisting commitment from those districts too.

Beyond this project however the relevance of this report will only be appreciated if it is used to inform and or influence policy formulation. The design and implementation of interventions during the next planned phase of the Lake Victoria project will do well by using the information generated in this particular project.

This report forms a complete picture when read along with the various other reports outputs from this process. These are the community and district reports from the Vision and strategy development processes in the five participating districts. These various outputs can be accessed from the World Bank and the National Task force.

## **Appendices**

### **Appendix 1**

#### **Summary of district findings (Drawn from the five district report**

This annex presents a summary of the prioritisation at the district level. In each of the five districts the five stakeholders, basing on the thematic areas assessed the current situation and developing a vision of the future they want to see.

Broadly, the national workshop discussions were in agreement with the district level prioritisation. The difference however lay in the fact that at district level a wide scope of priority issues was the basis of focus. At the national level the interest was in identifying the top priority issues.

The district summaries should therefore help to keep in perspective the unique and specific interest of certain stakeholder groups and may be useful at implementation stage to ensure that such priorities inform the design and prioritisation of interventions made by either government or CSOs at the various levels.

## **Ecology and Environment**

### **Pollution**

#### **(a) Current situation**

- Pollution due to human activity. This includes poor use and disposal of toxic waste, such as car oils, ammonia from distilling waragi<sup>14</sup>, plastics and polythene, into water bodies.
- Poor attitudes such as, 'Enyanja tenoga<sup>15</sup>', hence any amount of any thing could be dumped into the lake and no significant serious damage will be caused.
- Un regulated industrial growth leading to immense pollution with industrial wastes whose toxic effects may have far reaching effects.
- Silting of water resources from ever increasing agriculture activity especially along lake shore districts but also in upland district
- Floating islands often trap fish and nets and block water flow. The rotting fish contaminate and pollutes the lake.
- Bad fishing habits such as fish poisoning which arise from poor or weak enforcement of laws and degenerated moral standards.
- Poor or absence of proper urban planning coupled with rapid emerging urban sites such as landing sites and trading centres resulting into pollution explosions and emergence of slum type conditions.

#### **(b) Desired future**

- Proper disposal of human waste by using latrines and proper bath shelters.
- Well-planned industries where pollution levels are monitored.
- Use of biodegradable products such as paper bags instead of polythene.
- Reduced pollution levels.
- Well-planned urban centres with good houses and roads.
- Factories located in well-gazetted places where there are no human settlements.

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<sup>14</sup> Waragi is a local potent drink distilled from sugar cane molasses or bananas. The waste is often drained into water bodies.

<sup>15</sup> Fisher folk believe the lake is too big to be contaminated by anything.



### **(c ) Strategies**

- Popularising and enforcement of already existing laws such as not having agricultural activity at the lakeshores.
- Sensitisation of the communities and creation of community awareness on issues of the environment.
- Encourage and enforce environmental protection activities such as afforestation.
- Organise regular communal cleaning exercises.
- Development of participatory monitoring and evaluation mechanism.

### **Loss of habitat**

#### **(a) Current situation**

- The ecological system has been upset leading to extinction of certain fish species
- Swamps and forests are being cleared every day for urban settlement and agriculture mainly due to lack of effective planning and poor enforcement of conservation laws leading to destruction of habitat for wild animals.
- Bush burning as a main activity within the pastoral and agriculture sectors.
- Bad fishing methods example using chemical poisons, use of prohibited fishing nets hence depleting the lakes.
- Animal and bird species have become extinct for example Bimbale, Enlubu, Hipos.
- Trees are being cut for timber, firewood, and poles and to acquire farmland while no effective tree planting taking place.
- Water for both human domestic needs and livestock has reduced partly due to population pressure and partly because of deforestation.

#### **(b) Desired future**

- Sustainable use of forests
- Well planned settlements and urban centres
- Re emergence of lost fish species and other animal species including birds species.
- Swamps / wetlands along lakeshores.
- Recreation places game (parks, games sanctuaries)
- Fish, birds and animals species restored by putting in place conducive and supportive policies.
- Swamps / wetlands recreated along lakeshores.
- Good fishing practices being enforced and fish populations restored by avoiding fishing in breeding grounds.
- Good farming methods.
- Availability of wetlands, swamps, forests.
- Increased number of wild life animals, birds, insects

- Wildlife should be put in a protected area so that they do not disturb farmer's crops.
- Creation of awareness

### **(c) Strategies**

- Sensitisation and enforcement of proper fishing practices.
- Sensitising stakeholders about environment and its management.
- Promoting unity among the people to be able to monitor the plans and officers as well as the manner in which people use public infrastructures and facilities.
- Afforestation / reforestation and enforcement of strict laws on clearing swamps.
- Re-Introduction of the fish species that have become extinct and enacting policies for their protection
- Introduction of new fish species
- Afforestation and enforcement laws on wetlands swamp and forest destruction.
- Teaching and skilfully equipping stakeholders with the knowledge of proper farming methods.
- Equipping stakeholders with knowledge of proper farming methods.
- Fish populations restored by avoiding fishing in breeding grounds.
- Avoid destructive fishing methods.
- Closed season in fishing activity implemented

## **Natural resource utilisation and income generation**

### **Water resources**

#### **(a). Current situation**

- Poor waste management
- Water pollution

#### **(b) Desired future**

- Sound waste management practises
- Improved waste management and a lake free of pollutants

#### **(c ) Strategies**

- Waste avoidance, reuse, reduction and recycling
- Law enforcement on disposal
- Waste treatment plants for industries
- Industries to be located away from water sources
- Protect and conserve wetlands purifying the water
- Afforestation in the catchments areas
- Sensitise community on hygiene and sanitation

- Promote environmental conservation

## **Agriculture and forestry**

### **(a) Current situation**

- Land degradation and fragmentation
- Deforestation
- Loss of soil fertility

### **(b) Desired future**

- Proper land use and better-planned farming
- Afforestation
- Fertile soils

### **(c) Strategies**

- Planting trees
- Find alternatives to charcoal and firewood
- Modern methods of agriculture
- Sensitisation
- Encourage and facilitate appropriate urban practices (Kampala)
- Enact favourable laws and bye-laws and revision of land policy
- Zoned crop farming
- Educational seminars teaching better farming practises

## **Fisheries**

### **a) Current situation**

- Unsustainable fishing harvesting and bad fishing practises
- Lack of available fish market
- Fish farming has taken root
- Mineral resources not exploited

### **b) Desired future**

- Good and available market for fish
- Increase of fish ponds and fish farming communities

### **c) Strategies**

- Targeted sensitisation
- Formulation and enforcement of strong fishing regulations
- Gazetting landing sites
- Link communities to the market
- Promote fish farming groups and individuals

- Establishment of fish breeding centres

## **Wildlife and tourism**

### **(a). Current situation**

- Potential for wildlife tourism not exploited

### **(b). Desired future**

- Exploit wildlife tourism potential

### **(c ). Strategies**

- Find suitable areas for wildlife tourism
- Encourage tourism in Lake Victoria waters
- Proper marketing
- Develop infrastructure

## **Mining and industry**

### **(a). Current situation**

- Mineral resources not exploited

### **(b). Desired future**

- Exploitation of mineral resources

### **(c ) Strategies**

- Encourage investors in liaison with grass roots

## **Technical infrastructure and urban economy**

### **Technical Infrastructure**

#### **(a). Present situation**

- Many poor mar rum feeder road networks with many potholes and
- Impassable during the rainy seasons
- Lack of electric power especially on landing sites and Islands.

- Poor and inadequate telecommunication network especially in
- Remote\rural districts.
- Unplanned settlements structures in slum areas without sanitation facilities
- Construction in wetlands (residential and industry)
- Water transport routes not well developed.
- Many unplanned residential and settlement structures with poor quality, low latrine coverage and poor waste disposal

**(b). Desired Future**

- Construction and maintenance tarmac\all weather roads to boost economic activities in the area.
- Adequate banking facilities to improve on group savings
- Community voluntary feeder road maintenance
- Rural electrification in place
- Well-planned residential with flats to replace the existing slums.
- Improved telecommunication network.

**(c). Strategies**

- Encourage community road maintenance
- Government to lobby donors for tarmac feeder roads construction funds.
- Participatory planning in implementing development plans
- Strengthening community groups for village banking.

**Urban-Based Economy**

**(a). Present situation**

- Increased unemployment
- Increased rural–urban migrations influxes for employment opportunities
- Many industries built in wetlands lacking waste disposal treatment facilities.
- Limited coverage of micro finance with prohibitive condition
- Large families (6-8) congested in small rooms

**(b). Desired Future**

- Increased employment opportunities in urban and rural areas
- Well planned residential settlements
- More banking/micro finance institutions operating at affordable interest rates.
- Regulation and monitoring of licensing industries operating in wetlands (especially those with appropriate technologies for waste handling ).
- More communication companies in place operating at low costs.
- Increased rural electrification to attract small scale processing industries for more employment opportunities.

**(c). Strategies**

- Develop and extend infrastructure and services to stop rural - urban migration
- Community and government to set laws restricting rural urban- migration.
- Strengthen and enforce laws on development of settlement structures
- Government to facilitate and expand coverage of telecommunication
- Public be encouraged to operate community based savings/banks.

## **Social and demographic conditions**

### **Poverty alleviation**

#### **(a). Current situation**

- High prevalence especially at household level.
- Poverty alleviation programs do not reach grass-roots
- Unemployment
- Lack of or inadequate loans
- No co-operatives
- Markets inadequate
- Roads in poor state
- Corruption
- Despising jobs
- No savings, lavish lives (fishermen)
- Women participation not in line with their benefits
- Poverty resulting in environmental degradation
- People can't afford basic needs
- Tax defaulting among fishermen.
- Many people living in slums

#### **(b). Desired future**

- Improved standards of living
- Adequate, increase in incomes
- Increased access to loans & savings
- Co-operatives, groups formed
- Increase in trade and number of industries
- The majority in working age group sustainable employed (in formal and informal sectors)
- The poorest of the poor access poverty programs
- Improved roads/infrastructure
- Elimination of corruption

#### **(c). Strategies**

- Revive co-operative societies to access loans
- Increased vocational institutions
- Targeted sensitisation & training/capacity building on IGAs and development, environmental protection
- Accessing loans (from financial institutions) and initiating IGAs

- Proper planning
- Identification & improvement of markets
- Viable economic policy favouring the informal sector
- Infrastructure development and attraction of investors

## **Health and social services**

### **(a). Current situation**

- Few health units, high cost in some, limiting access
- Shortage of drugs and medical staff plus TBAs
- High Mortality and morbidity rates
- Poor sanitation and hygiene (especially at landings)
- Poor health standards, preventable diseases rampant
- HIV/ AIDS pandemic still prevalent
- Promiscuity among fishermen
- Poor nutrition (esp. of children), no food security (esp. in Mayuge and Bugiri)

### **(b). Desired future**

- Well-equipped, staffed, accessible (public) health units with enough drugs for improved quality of services.
- Enough health units at all levels
- HIV/ AIDS awareness in communities, Zero HIV/AIDS Incidents by
- 2015
- Reduced mortality rate
- Increased food production and storage facilities.
- Improved health services
- Health units constructed
- Latrines in every home
- Proper sanitation in every household
- Higher life expectancy
- Clean water available
- Reduced burden of disease
- Nutrition awareness and proper feeding in every home
- Good child care

### **(c). Strategies**

- Construct, staff and equip health units with community contributions
- Lobbying for assistance from able organizations.
- Targeted sensitisation and Health education campaigns – on disease prevention, immunization
- Sanitation and hygiene
- Enforce latrine construction
- Sensitisation on HIV/AIDS, STDs, reproductive health



- Train more TBAs
- Promote & ensure food security and proper nutrition thru growing more food and improving post harvest handling

## **Education and training**

### **(a). Current situation**

- Population with low levels of education
- Poor quality of education
- Vocational institutions few or lacking
- Illiteracy levels still high
- Scarcity of schools & poor staff accommodation
- Ratio of teacher per pupils is very high
- Poorly performing teachers, not inspected.
- Poor childcare and parental support
- Late release of UPE funds & poor feeding in schools

### **(b). Desired future**

- Good well facilitated public schools
- More school (esp. secondary) and vocational institutions constructed
- Enough, professional committed teachers
- Majority of people literate (for conservation and political participation enhancement)

### **(c). Strategies**

- Targeted sensitisation – (on child rights).
- Construction of more (public) schools, classrooms staff houses and vocational institutions
- Equip and promote vocational skills in secondary schools.
- Provide services at limited costs.
- Strengthen and enforce UPE
- Enforce girl child education
- Quality education for all
- Adult functional literacy enforced
- Promote collective responsibility in education
- Timely allocation of funds in education and training
- Employ and motivate professional teachers

## **Population issues**

### **(a). Current situation**

- High population growth (especially in Mayuge and /Bugiri) and limited resources per population caused by
- Lack of Awareness

- Polygamy, early marriages, and negative attitudes towards family planning
- Rape, defilement and pre mature pregnancies, and early marriages.
  
- Immigration into districts resulting in land disputes and problems with resettlement of the people.

**(b). Desired future**

- Managed/planned population
- Thru:
- Fertility regulation by promoting family planning
- Stable families
- Promotion of “small” manageable family sizes (e.g. 6 children)
- Change of marriage practices.
- Curb defilement, rape and pre mature pregnancies
- A stable nation

**(c) Strategies**

- Sensitise and encourage family planning and child spacing practices.
- Offer reproductive health services. -Sensitisation of the community on child rights
- Discourage polygamy and enforce laws on defilement
- Implement child rights statute and human rights
- Avoid internal and external wars.
- Restrict immigration

**Governance and policies and institutions**

**Decentralisation and participation**

**(a) Current Situation**

- Planning is still top down with decentralisation only effective up to Sub county level.
- Corruption for instance local leaders and technical people are also involved in activities that destroy the environment.

**(b). Desired future**

- Effective bottom up processes.
- Elimination of corruption
- Laws in place implemented effectively.

**(c). Strategies**

- Community participation in fighting corruption

## **Gender**

### **(a). Current Situation**

- Community not gender sensitive.
- Women are involved in least income generating activities and when they begin paying men take them away.
- Low education for girl child with violation of girls rights in such cases as forced marriages

### **(b). Desired future**

- Gender sensitive community development programs with gender issues well streamlined.
- Liberation of the girl child and men and women cooperating more in development work.

### **(c). Strategies**

- Mainstreaming gender in all activities and programs
- Sensitisation of communities on gender issues.
- Enforcement of laws especially defilement and abuse.
- Maintain the law against sexual abuse

## **NGOs and civil society**

### **(a) Current Situation**

- Increasing emergency of NGOs and CSOs as mechanisms that are promoting developing.
- NGOs/ CBOs are not involved as stakeholders in setting agricultural and environmental policy at official level.
- Low collaboration between the Government and NGOs and between fellow NGOs often leading to duplication of activities and waste of resources.
- NGOs are not transparent and accountable.
- Role duplication among NGOs.
- NGOs have poor phase out strategies often leading to a breakdown in local systems.

### **(b). Desired future**

- Increased partnership between government and NGOs and Civil society as a whole.
- Full participation of both government and NGOs in planning, monitoring and financing of development activities.
- Wide spread tangible development interventions
- NGOs also participating in activities such as road construction.

### **(c). Strategies**

- Formation of effective NGO forums at different levels to foster government NGO collaboration.
- NGOs phase out strategies well known by their partner communities
- Increase monitoring of NGOs.
- Increased community participation and involvement in NGO programs.
- Encourage formation of more NGOs.

## **Legislative and policy barriers**

### **(a). Current situation**

- Many people are ignorant about existing policies
- High taxation especially for youths, which is a disincentive for work.
- Different laws apply in the three East African countries promoting conflict of behaviour among the people along common borders e.g. laws on fishing.
- Poor mobilisation and interest of local leadership.

### **(b). Desired future**

- Pro people laws and policies in place.
- Evenly spread and fair taxation

### **(c). Strategies**

- Increased political and civic education and sensitisation about their various roles.
- Amendment of obsolete laws.
- More sensitisation about the Local Government Act.
- Current procedures in program designing and implementation strengthened
- Current procedures in program designing and implementation strengthened

## Appendix 2

### Other issues mentioned at district level but not prioritised

Ecology and environment	Governance policies and institutions
<ul style="list-style-type: none"> <li>• Put in place a closed season in fishing activity to allow fish regenerate.</li> <li>• Water sources are unprotected, located far way from homesteads and also dry up in the dry season.</li> <li>• Bush fire management systems in place</li> <li>• Greater involvement of the communities in management and exploitation of the biological resources.</li> <li>• Fish have reduced both in size and shape due to decreased water volumes.</li> <li>• Holes from which sand has been mined remain uncovered.</li> </ul>	<ul style="list-style-type: none"> <li>• Provision of loans and construction of schools.</li> <li>• Specialisation e.g. Uganda Environment Protection Forum for solid waste</li> <li>• Forming a networking body</li> <li>• Create awareness on waste disposal</li> <li>• Waste avoidance and re-use</li> <li>• Waste reduction</li> <li>• Recycling waste</li> <li>• Law enforcement on waste disposal</li> <li>• Increased vocational institutions</li> <li>• Revive co-operative societies to access loans</li> <li>• Identify sites and attraction.</li> <li>• Mapping.</li> <li>• Gazette</li> <li>• Develop partnership with owners</li> <li>• for collective development</li> <li>• Publicize</li> <li>• Encourage nationalism</li> <li>• Awareness forums</li> <li>• Inter-marriages</li> </ul>
<ul style="list-style-type: none"> <li>• Noise pollution such as noise from mosques and music.</li> <li>• Bush burning damaging the environment and habitat.</li> <li>• Animals and human use of the same water points often causing disease.</li> <li>• Clearing of swamps and wetlands for agriculture activity and construction</li> </ul>	<ul style="list-style-type: none"> <li>▪ Set up joint desk to network.</li> <li>▪ Register with local leaders in areas of operation.</li> <li>▪ Increased networking between NGO's, CBOs and local council.</li> <li>▪ Putting in place infrastructure for data management, collection and storage. <ul style="list-style-type: none"> <li>• More research</li> <li>• Establishment of effective communication channels between the different levels of society</li> <li>• Training data managers</li> </ul> </li> <li>▪ Maintain the law against sexual abuse</li> </ul>

## Appendix 3

### Cross sector interviews

Institution	Makerere University – MUIENR	Ministry of Local Government	NEMA – National Environment Management Authority	Lake Environment Management Project	Directorate of water Development
<b>1. Major problems and negative tendencies that need to be addressed?</b>	<ul style="list-style-type: none"> <li>-Pollution from municipalities</li> <li>-Poor fishing methods</li> <li>-Lack of scientific data</li> </ul>	<ul style="list-style-type: none"> <li>-Harmonization of development activities being implemented by different stakeholders</li> <li>-Limited community participation in the development planning process</li> <li>-Limited data/information available for planning and decision making functions</li> </ul>	<ul style="list-style-type: none"> <li>-There is increased development activity (industries, recreation centres, and leisure centres and other private sector interests especially at the lakeshore. These have a risk of negatively impacting on the lake if not controlled and regulated. This is a new increasing trend.</li> <li>-There is need for more stringent enforcement on fishing activities to control illegal fishing methods.</li> <li>-Need to control further direct pollution from industries, run off and need to reduce encroachment into lake edge ecosystems such as wetlands, which are important in sustaining fisheries as well as in pollution control.</li> </ul>	<ul style="list-style-type: none"> <li>-Land degradation leading to decline in its productive capacity for crops and livestock and to unsustainable food production and food security?</li> <li>-Water pollution leading to eutrophication, poor water quality and reduced fish production and threatening food security, employment and foreign exchange?</li> <li>-Destruction of biodiversity leading to terrestrial and aquatic species and genetic losses in the lake basin thereby depriving the future generations of the benefits of biodiversity.</li> </ul>	<ul style="list-style-type: none"> <li>-Increased municipal and industrial waste discharge into the lake.</li> <li>-Reduction of deforestation in the catchments</li> <li>-Poor land use practices in the catchments</li> </ul>
<b>2. Major causes and driving forces of the problems and negative developments</b>	<ul style="list-style-type: none"> <li>-Lack of waste water treatment facilities or malfunctioning of the existing structures</li> <li>-Silent resistance</li> </ul>	<ul style="list-style-type: none"> <li>-Resistance of some central government agencies to devolve their functions to the local governments</li> </ul>	<ul style="list-style-type: none"> <li>-The lake environment is increasingly being recognized as a good recreation amenity previously not exploited for</li> </ul>	<ul style="list-style-type: none"> <li>-Poor land use practices, deforestation and destruction of wetlands due to ignorance and lack of access to scientific</li> </ul>	<ul style="list-style-type: none"> <li>-Lack of waste treatment facilities for shoreline industries and</li> </ul>

	and low enforcement of laws and regulations -Projects are geared towards management with little or no investment in research and data generation.	as a requirement for implementation of the decentralization policy. -Inadequate institutional arrangements and capacity for the bottom-up development planning process - Limited resources (human, financial and material) for effective data collection, entry, storage, analysis and dissemination.	this purpose. -Regulation of fisheries requires cross border mechanisms (between districts and between countries) and such mechanism are weak or lacking. -weak enforcement of existing laws on pollution control, and laws on management of wetlands and lakeshore ecosystems.	information. -Pollution loading from point and non-point sources of pollution due to ignorance and inappropriate collection and treatment of liquid and solid wastes. -Over fishing, destruction of wetlands and deforestation as well as use of destructive fishing practices due to ignorance and lack of access to scientific information.	municipalities -Uncontrolled cutting of trees -Land use management policies / practices not environmentally sound
<b>3.Extent the present situation in the sector affected or influenced positively by what is going on in other sectors</b>	Government departments and institutions to put emphasis on data generation/research -other sectors should call upon our institute to participate in Lake Victoria programs like in LVEMPI.	-Other sectors are beginning to embrace the decentralization policy, which is the prime objective the ministry of local government is charged to oversee.	-Most sectors are revising their policies and laws to include aspects on environment management.	-LVEMP is multi-discipline and multi-sector where all activities in various sectors affect or influence each other in order to obtain a holistic output leading to sustainable environmental and socio-economic development.	-The degree of Eutrophic tendencies increasing in localized bays and shoreline areas. The rest of the lake still okay.
		The effect for the sector is positive	-The privatisation policy has not fully institutionalised environment management as a matter of private sector corporate responsibility. This makes enforcement of environment requirements difficult even on issues, which can very easily be addressed by the private	Holistic approach by LVEMP reduces negative effect or influence among the sectors.	-Hydropower production at Jinja at risk due to water hyacinth infestation.



<p><b>4. Availability of the necessary and relevant knowledge or information on the present situation and ongoing trends in the lake basin</b></p>	<p>-Partly yes but trend data is lacking, hence making predictions difficult. -There is lack of spatial and temporal data for most if not all parameters, for example those related to pollution</p>	<p>Yes</p>	<p>sector. Yes and no The area of population trends in the lake basin and its future impact on the health, well-being and sustainable use of the resources need to be looked into.</p>	<p>Yes but not all. Inadequate spatial development plans for the lake basin. There are however plans to develop structure plans for the lake basin for use during the second phase of LVEMP.</p>	<p>Yes</p>
<p><b>5. Fifteen years vision regarding the changes that have taken place in the lake basin.</b></p>	<p>The lake ecosystem is deteriorating as revealed algal blooms and low dissolved oxygen levels in the water.</p>	<p>Harmonized participatory development initiatives in the basin.</p>	<p>-Decreased fishery production against ever worsening quality of the lake environment. -Degradation of land resources in the riparian areas could contribute significantly to worsening the lake environment and water quality.</p>	<p>-Implementation of sustainable socio-economic development activities within the scope of spatial development plans for the lake basin taking into consideration ecosystem research information and suitable environmental management resources.</p>	<p>-My vision is that if we act now and progressively, we shall contain the negative trend in WQ reduction</p>
<p><b>Positive developments</b></p>	<p>Programs like LVEMP and other projects like water resource assessment are addressing some of the negative tendencies.</p>	<p>Available data/information for planning and decision-making.</p>	<p>-Increased efforts at regional collaboration to address problems affecting the lake.</p>	<p>-Tendency to sustainable socio-economic development environmental conservation.</p>	<p>-Data collection and research have taken place</p>
<p><b>6. Required changes in present policies and strategies to facilitate reaching</b></p>	<p>-There should be continuous data collection and analysis.</p>	<p>-Data management Strategy formulation -Harmonized participatory planning</p>	<p>-Increased enforcement of laws on pollution control. -Increased enforcement of laws on lakeshores to be stepped up.</p>	<p>-Adoption and development within the scope of developed spatial development plans.</p>	<p>All major developments in and around Lake Victoria need to be</p>

<b>the stated vision within the sector</b>		approaches			subjected to EIA. This is to ensure sustainability.
<b>In other sectors</b>	-There is need to put emphasis on generating data and preferably through research		-step up enforcement against illegal fishing methods. -Improve farming practices in riparian areas.	-Ownership of the idea with understanding of operating within environmental guidelines designed for sustainable socio-economic development within the lake basin.	Harmonization of policies related to land, investments, land use, forestry etc
<b>In civil society</b>	-Use of generated data to raise awareness (N.B most of civil society organizations are looking at monetary gains other than helping to solve societal problems)	-Increased participatory in implementation of government programs	-civil society advocacy for protection of the lake ecosystem should be stepped up.	-Clear understanding of the reason for environmental conservation and the benefits that accrue to them though this involvement in sustainable private sector development in all spheres.	Changing ways of relation to land care should be taken to consider environmental consequences of our actions.
<b>In the international community</b>	As equal partners in planning and implementation of projects, not of "fathers" with everything to give the sons.		Adaptation and implementation of agreed regional actions to protect the lake ecosystem.	-provision of support (financial, technical, or otherwise) to enhance socially and environmentally sustainable socio-economic development.	Donor support needed to fulfil the roles of implementation of the activities
<b>7.Recommended main actors in bringing about change in the desired direction</b>	-Government institutions and agencies -Private sector institutions -NGOs and CSOs -International	-Government institutions and agencies -Private sector institutions -NGOs and CSOs -International	-Government institutions and agencies- NEMA, Fisheries department -Private sector institutions -NGOs and CSOs -International organizations and donors	-Government institutions and agencies -Private sector institutions -NGOs and CSOs -International organizations and donors	

	organizations and donors	organizations and donors			
<b>8. Indicators of change</b>	This depends on whether there is a clear monitoring and evaluation program in place i.e. there should be clear indicators and means of verification of the indicators.	Both the output and outcome indicator set up by the government	-Fish productivity -water quality -quality of industrial discharges -Status of riparian ecosystems such as lake edge wetlands	-Reduced levels of pollution (in measurable quantities) -Improved agricultural production (fish, crops, livestock) -Increased foreign exchange earning -Increased per capita income -Reduction in biodiversity losses -Improved standards of living in the overall society.	Continued data collection and in lake monitoring
<b>9. Responsibility for monitoring and reporting future changes in the basin -for the whole basin</b>	Organization/body set up by partner states in the basin	Project implementation team	LVEMP	-The institutions within each country that would forward the national output to the EAC secretariat for consolidation into one result.	Ministry of Water Lands & Environment, Directorate of Water Development, Water Resources Management Department responsible for Lake Victoria.
<b>Within your sector</b>	Designated officer - researcher	The ministry of local government	DWD	The national secretariat of the LVEMP for the national use and for transmission to the EAC secretariat for regional consolidation into one result.	Water Resources Management Department

## **Appendix 4**

### **Minister's speech**

Opening speech by the Hon Minister of State for Environment Hon Kezimbira Musingo at the National workshop

HE the Ambassador of the Royal Norwegian Embassy,

Workshop participants, Ladies and Gentlemen:

It is indeed a pleasure to be associated with this historic event when the stakeholders within the Lake Victoria basin meet to deliberate on the future and destiny of one of the largest fresh water bodies on earth.

Lake Victoria provides enormous benefits to riparian communities and beyond in form of water, fisheries etc, which contribute immensely to poverty eradication and prosperity enhancement.

However the potential of the lake is to a large extent not fully harnessed. When an attempt has been made these resources have been misused or abused resulting in the degradation of the lake to the detriment of the communities.

Many of you will recall the sad episodes of the spread of water hyacinth and the fish poisoning, which resulted in the loss of income and employment to thousands of people in the region.

This state of affairs calls for prompt action and visionary thinking in order to forestall similar catastrophes and ensure maximum sustainable benefits from Lake Victoria and its resources.

It is for this reason that the three governments of Kenya, Tanzania and Uganda signed a tripartite agreement to implement the Lake Victoria Environment Management Project whose first phase is coming to an end.

I believe that we have made some progress under LVEMP 1, which in my opinion, was largely an information gathering and capacity building phase.

However, the success and failures need to be considered against the backdrop of high population growth (which triggers high speed habitat conversion), widespread rural poverty (which in itself is a major cause of natural resources abuse), lack of appreciation of the importance of the Lake's resources for economic and social development, and limited understanding at all levels about the process that undermine Uganda's natural resources base.

It is therefore apparent that much more needs to be done in order to consolidate the achievements of LVEMP 1 and to develop new and realistic strategies to translate these achievements into tangible outputs thereby contributing to the national goal of poverty eradication and prosperity enhancement.

This definitely requires a long-term shared vision for all the stakeholders and beneficiaries of Lake Victoria and its resources. This vision should be based on people's needs and aspirations as well as the needs of the generations to come. This will promote the national objective of poverty eradication by contributing to the basic requirements of food security and sustainable economic development, while ensuring that Lake Victoria is maintained as national and regional asset for posterity.

To achieve successful management of the Lake and its catchments we need:

- A sound knowledge base for decision making.
- Practical alternatives to unsustainable use of Lake Victoria resources;
- Sustained political will and support at all levels translated into action and finances,
- Behavioural and attitudinal change in society to become friendlier to the lake both in word and deed.
- Coordination and co-operation among stakeholders.

But more importantly we need to strengthen our community institutions so that they can play an effective role in the collective and shared responsibility for the management of the Lake basin.

Therefore this national consultative workshop is an important step in the process of defining the vision, strategy and objectives for the management of Lake Victoria in the medium and long term.

I therefore urge to take this visioning process very seriously and to pay adequate attention to these issues during your deliberations in order to enable us to formulate a pragmatic vision and strategy that can stand the test of time.

My Ministry and the government in general considers the development of the Lake Victoria vital to the overall development of the region and are counting on you to come up with a realistic vision and strategies for reaching the vision.

I would like to assure you of the continued commitment and support of My Ministry given its mandate to promote and ensure the rational and sustainable utilization, development effective management of water resources, lands and the environment to promote social welfare and economic development.

I wish at this juncture to underscore the role and contribution of our partners in development for the financial and technical assistance extended to the government. We hope that you will continue to place the sustainable development of Lake Victoria high on your agenda and the vision and strategy development here will guide you in practising the allocation of resources.

I thank the Ambassador of Norway, World Bank, and all other donors who have made this process and other related processes possible. I wish to request you all to properly utilise every penny given to us for the good of the people of this country

It is now my pleasant duty to declare the National workshop on Vision Development for Lake Victoria open and to wish you fruitful deliberations.

I thank you.

## Appendix 5:

### Project outputs

<b>District</b>	<b>Type of report</b>
Kampala	District report
	Community report
Mayuge	District report
	Community report
Bugiri	District report
	Community report
Rakai	District report
	Community report
Mubende	District report
	Community report
National level	Progress reports
	National report
	Visioning Facilitator's manual

## **Appendix 6**

### **Profile of the facilitating organisations**

#### **Kampala**

The Uganda Environment Protection Forum- An NGO operating in Kampala district carrying out various activities and awareness campaigns. The organisation is currently involved in a pilot garbage-recycling project focusing on non-biodegradable materials such as plastics.

#### **Rakai**

Integrated rural Development Initiatives- Is a national NGO operating in several rural districts in the country. IRDI runs a project in Rakai district that focuses ameliorating the effects of HIV AIDS on people and food security. The organisation has its headquarters in Kampala.

#### **Mayuge**

Both the Community Development and Environment and Water departments are operational in most communities in the district. It was therefore easy for them to facilitate the process to its conclusion in the district.

#### **Bugiri**

Tororo Youth Development Association, (TOYODA) is a development initiative formed by University and college graduates that hail from Busia district. The main objective of the organisation is to harness local resource and mobilise communities for development. It was convenient for the organisation to facilitate the process in the neighbouring district of Bugiri, one of the most recently created districts, where there was no known viable local organisation to lead the process.

#### **Mubende**

Rural Communities in Development (RUCID), a local NGO has its head office in Mityana town but operates in the districts of Mubende, Mpigi, Wakiso and parts of Luwero. The organisation promotes Sustainable Agriculture practices with a strong bias on Environment protection. The organisation also promotes farmers incomes by encouraging organic farming and marketing the products in more profitable markets in Europe.



## Appendix 7

### The National task force

Name	Designation
Ecaat Justine (Mr)	National Environment Management Authority (NEMA)
Bitwayiki Constatine (Mr)	Ministry of Local Government
Kagoro Patrick (Eng)	Water supplies Department
Kakuze Tabitha ( Ms)	ECOVIC Uganda Chapter ( NGO)
Kansime Frank ( Dr)	Makerere University Institute of Environment and Natural Resources.
Kimbowe Joseph( Mr.)	Lake Victoria Local Authorities Corporation
Kirya Sese William ( Mr)	National Secretariat LVEMP
Kizza Francis X.M ( Mr.)	Fisheries Resource Department
Mafabi Paul ( Mr)	Wetlands Inspection Department Ministry Water Minerals and Environment.
Magunda Mathias (Dr)	Kawanda Agriculture Research Institute ( NARO)
Mutende James ( Dr)	Uganda Investment Authority
Mwebembezi Leo	Water resoeuce department DWD
Balirwa John ( Dr.)	Fisheries Resources Research Institute NARO
Ogwal Moses (Mr)	Uganda Fish Processors and Exporters Associaition.

## Appendix 8:

### List of participants invited to the National Workshop

Office/ Title	Name
Chairman and vice Parliamentary committee on natural resources	- Engineer Kaweesi - Loyce Bwambale
East African community	Yona Kanyomozi
Agriculture and environment	Hon. Kityo Mutebi
Min of finance and economic planning	PS Aid coordination
Min of water lands and environment	All Commissioners, - Executive Director NEMA
NGO Forum	Warren Nyamugasira
UFFCA	Ceremos Kamuturaki
UMA	Hillary Obonyo
Private sector foundation	Nimroid Waniara
Uganda IADS Commission	Kihumuro Apuuli
EJAU	Elizabeth Birabwa
Health	Commissioner for environment sanitation
Education	- Commissioners higher and primary education
Uganda National Federation of farmers	Andrew Mwendya
Ministry of Justice	Solicitor General
Ministry of Natural resources	Commissioner for mining
Ministry of tourism wild life/ antiquities	3 commissioners (Trade, industry, tourism)
Association of professional engineers	Chairperson
LAVRLAC	Chairperson
NAWOU	Executive secretary
LAVEMP- Executive secretary	Dr. Orach Meza
Nile Basin- executive Director	Mr. Musuya
IUCN	Country representative
Institute of Environment and Natural Resources MUK	Director
Donors	(NORAD, DFID, WB, DANIDA, EU, SIDA, USAID, Netherlands Embassy, GTZ, MS Ug
Economic research centre	Director
Ministry of gender labour and social development	- Commissioner s, Gender, Youth, Community development, Occupational health
National council science/technology	Executive director- Dr. Nyira
Police	Inspector General
Ministry of Foreign affairs	EA desk
Presidents office	Director for economic monitoring
Director Economic affairs	Keith Muhakanizi
Movement Secretariat	Ezra Suruma
Lake basin districts	- 12 CAOs, 17 chairpersons
BUCADEF	Executive Director
Busoga Development foundation	Coordinator
UWA	Executive Director
Min Agriculture animal industry and fisheries	- Commissioner Animal Industry - Commissioner Crops
Uganda Tourism Board	Executive Director
MISR	Director
NARO	Director General
UJCC	Grace Kaiso
UMCS	Secretary General
Population secretariat	Dr. Musinguzi
Facilitating NGOs in the districts	One person form each
Eminent people	Dr. Aluma
Eminent people	Professor Okedi
National task force	14 people
International consultants	Four people
GUEST OF HONOR Min Environment	Hon Kezimbira Muyingo
PS environment- to close the workshop	Mr. Kabanda

Community representatives	One person for each stakeholder group
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## Appendix 9:

### List of stakeholders who participated at the different levels

Community	No	District	No	National	No	Others	
Fisher-folk <sup>16</sup>	600			Ministers	1	Key informants	9
Youth groups and youths leaders	350	District technicians	60	District technicians (environment, community development, forestry)	7		
Women groups	150	Religious leaders	10	Line ministries, commissioners	7		
Local leaders at L.C one level	125	Traders	15	Donors (SIDA, EU, World Bank etc)	5		
Traders most fish traders	50	NGOs and CSOs	25	Ambassadors (Norwegian)	1		
Farmers	570	Farmers	15	NGOs and CSOs	15		
Traditional structures	20	Fisher folk	7	Chief administrative officers from the basin districts	5		
		Environment officers	14	Institutions of higher learning	3		
		Industrialists	2	Industrialists and private sector foundation	2		
		Town clerks	2	Media	9		
		Councillors	20	Farmers			
		Women	30	Fisher folk	3		
				Other related sectors e.g. LVEMP and Nile basin	10		
				Academicians	4		
				L.C.V chairpersons from the basin districts	6		
				PS. Environment	1		

<sup>16</sup> Various categories of fisher folk were consulted including boat owners net owners, labourers and fish mongers.

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