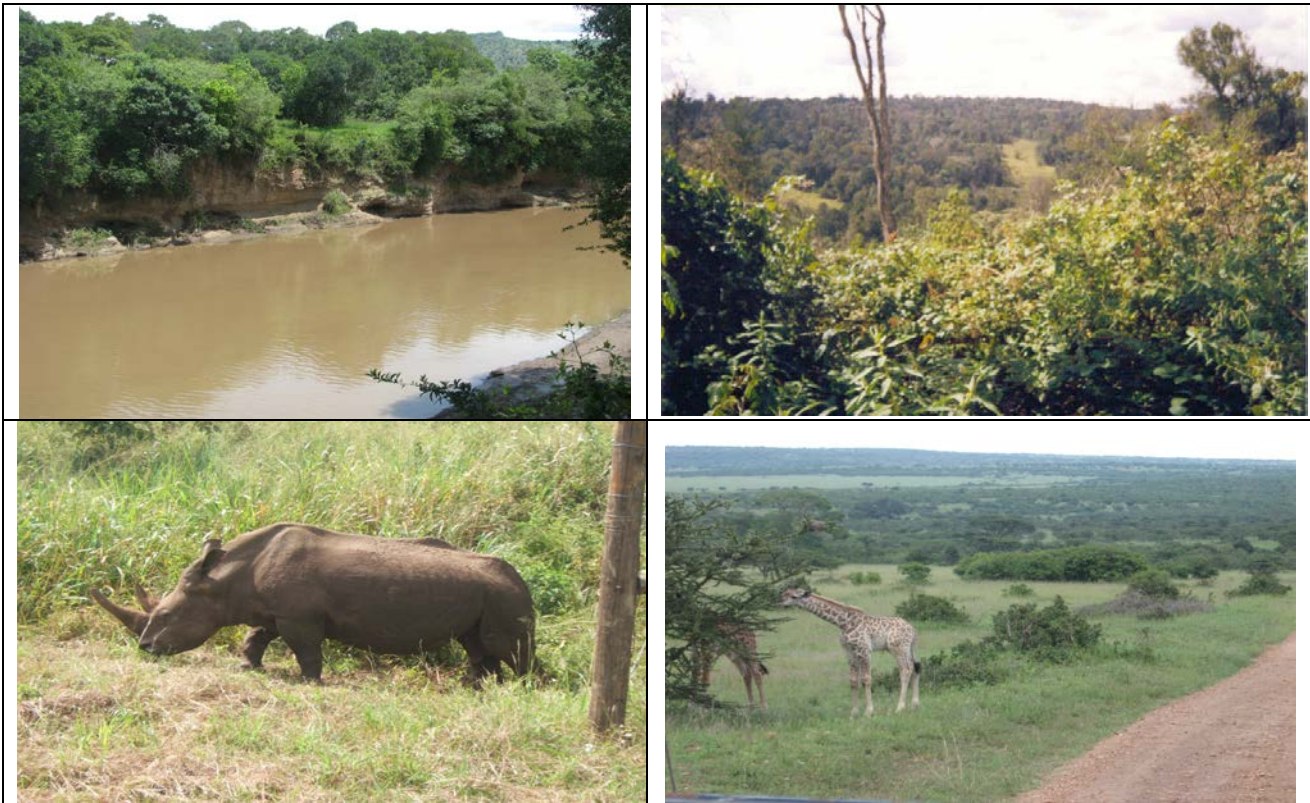


**EAST AFRICAN COMMUNITY  
LAKE VICTORIA BASIN COMMISSION**

**TRANSBOUNDARY WATER FOR BIODIVERSITY AND  
HUMAN HEALTH - MARA RIVER BASIN  
(TWBH-MRB) PROJECT**



**MARA RIVER BASIN NATURAL RESOURCES  
MANAGEMENT INSTITUTIONAL CAPACITY  
NEEDS ASSESSMENT**

**FINAL REPORT**

15<sup>th</sup> February 2011

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## ACRONYMS

<b>APL</b>	Adjustable Programme Lending
<b>AWF</b>	African Wildlife Foundation
<b>BMU</b>	Beach Management Unit
<b>CAC</b>	Catchment Advisory Committees
<b>CBO</b>	Community-Based Organization
<b>CDM</b>	Clean Development Mechanism
<b>CFAs</b>	Community Forest Associations
<b>CITES</b>	Convention on International Trade in Endangered Species of Wild
<b>CMC</b>	Community Management Committee
<b>COMIFORM</b>	Community Based Integrated Forest Resources Conservation and
<b>CP</b>	Cleaner Production
<b>DCM</b>	District Council of Musoma
<b>DCR</b>	District Council of Rorya
<b>DCS</b>	District Council of Serengeti
<b>DCT</b>	District Council of Tarime
<b>DEC</b>	District Environment Committee
<b>DPCT</b>	Districts Project Coordination Team
<b>EA</b>	Environmental Audit
<b>EAC</b>	East African Community
<b>EAWS</b>	East African Wildlife Society
<b>EIA</b>	Environmental Impact Assessment
<b>ENSDA</b>	Ewaso Ngiro South Development Authority
<b>FOMAWA</b>	Friends of the Mau Watershed
<b>FZS</b>	Frankfurt Zoological Society
<b>GBM</b>	Green Belt Movement
<b>GEF</b>	Global Environmental Facility
<b>GIS</b>	Geographical Information Systems
<b>GLOWS</b>	Global Water for Sustainability
<b>GMO</b>	Genetically Modified Organism
<b>GoK</b>	Government of Kenya
<b>ICDP</b>	Integrated Conservation and Development Project
<b>ICS</b>	Interim Coordinating Secretariat
<b>IDA</b>	International Development Agency
<b>IGA</b>	Income Generating Activities
<b>ILRI</b>	International Livestock Research Institute
<b>IRBM</b>	integrated River Basin Management
<b>IUCN</b>	International Union for Conservation of Nature - World Conservation
<b>IWRM</b>	Integrated Water Resource Management
<b>KFS</b>	Kenya Forest Service
<b>KFWG</b>	Kenya Forests Working Group
<b>KWS</b>	Kenya Wildlife Service
<b>LVB</b>	Lake Victoria Basin
<b>LVBC</b>	Lake Victoria Basin Commission
<b>LVEMP</b>	Lake Victoria Environmental Management Project

	Management Project
<b>MEAs</b>	Multilateral Environmental Agreements
<b>MEMR</b>	Ministry of Environment and Mineral Resources –
<b>MM</b>	Maasai Mau
<b>MMNR</b>	Maasai Mara National Reserve
<b>MNRT</b>	Ministry of Natural Resources and Tourism
<b>MOE</b>	Ministry of Education
<b>MOT</b>	Ministry of Tourism
<b>MOWI</b>	Ministry of Water and Irrigation
<b>MPs</b>	Management Plans
<b>MRB</b>	Mara River Basin
<b>MRBI</b>	Mara River Basin Initiative
<b>MRWUA</b>	Mara River Water Users Association
<b>NCC</b>	Narok County Council
<b>NEMA</b>	National Environment Management Authority
<b>NGOs</b>	Non Governmental Organizations
<b>NPCT</b>	National Project Coordination Team
<b>NRM</b>	Natural Resources Management
<b>PES</b>	Payment for Environmental Services
<b>PFM</b>	Participatory Forest Management
<b>SCMP</b>	Sub-Catchment Management Plan
<b>SIDA</b>	Swedish International Development Agency
<b>SWOT</b>	Strength, Weakness, Opportunity, Threat
<b>TANAPA</b>	Tanzania National Parks
<b>TBWUA</b>	Transboundary Water Users Association
<b>TEC</b>	Technical Environmental Committee
<b>ToR</b>	Terms of Reference
<b>TWB-MRB</b>	Trans-boundary Water For Biodiversity and Human Health Mara River Basin Project
<b>UNEP</b>	United Nations Environment Programme
<b>USAID</b>	United States Agency for International Development
<b>WRMA</b>	Water Resources Management Authority
<b>WRUA</b>	Water Resources Users Association
<b>WWF</b>	WWF Eastern and Southern Africa Regional Programme Office
<b>ESARPO</b>	

# EXECUTIVE SUMMARY

## 1. Introduction

This report deals with the Natural Resources Management Institutional Needs Assessment of the Mara River Basin.

The report gives an inventory of the institutions dealing with natural resources management and a detailed assessment of the capacities to fulfill their mandates. The report also gives the Strengths, Weakness, Opportunities, and Threats of the key institutions dealing with Natural Resources Management, in the areas of forestry, wildlife, and water resources, in the Mara River Basin, both in Kenya and Tanzania.

## 2. Methodology

The methodology used consisted of identifying key institutions dealing with the management of forests, wildlife and water resources in both Kenya and Tanzania. The institutions identified were the units of analysis in the assignment. Officers from the respective institutions were targeted for the interviews either individually, or where possible in groups. Literature review was also undertaken. The assessment focused on the mandates of the various institutions and groups, and how they were meeting them. The assessment also looked at challenges in implementing respective institutional mandates and how these would be overcome. A Strengths, Weaknesses, Opportunities, and Threat (SWOT) analysis was also undertaken.

## 3. Capacity Needs Assessment Findings

The capacity needs for the various organizations identified as being key players in the management of wildlife, forests and water resources are as follows:-

Institutions	Mandate/Responsibility	Existing Capacity	Specific Capacity Needs
<b>Kenya</b>			
<ul style="list-style-type: none"> <li>National Environmental Management Authority - NEMA</li> </ul>	<ul style="list-style-type: none"> <li>⇒ General supervision and co-ordination over all matters relating to the environment</li> <li>⇒ Implementation of all policies relating to the environment</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Limited monitoring and coordinating environmental activities</li> <li>⇒ Preparation of annual state of the environment in Kenya;</li> <li>⇒ Limited public education and awareness creation</li> <li>⇒ Compliance and Enforcement of environmental legislation</li> <li>⇒ Review of EIAs and EAs</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Skills among NEMA personnel in Integrated Natural Resources Management</li> <li>⇒ Skills within DEC on environmental management</li> <li>⇒ Enhanced inter-sectoral capacity for coordination</li> <li>⇒ Enhanced capacity for environmental education and awareness creation especially on water pollution</li> <li>⇒ Enhanced capacity for monitoring of environmental activities in the MRB</li> <li>⇒ Transport and equipment – computers and GPS for improved monitoring</li> <li>⇒ Building capacity of DEC to assist in monitoring and reporting environmental issues</li> </ul>
<ul style="list-style-type: none"> <li>Kenya Forest Service (KFS)</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Conserve, develop, and sustainably manage forestry resources on</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Limited capacity in creating environmental awareness;</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Formation and training of CFAs for joint management of forest</li> <li>⇒ Formulation of management plans and business</li> </ul>

Institutions	Mandate/Responsibility	Existing Capacity	Specific Capacity Needs
	state, local authority, and private land	⇒ Limited capacity in training community groups ⇒ Nurseries establishment; ⇒ Limited capacity in protecting forests; ⇒ Limited capacity in mobilizing communities for afforestation and riverine planting ⇒ Limited capacity in formulation of management plans and business plans	plans ⇒ Development of benefits sharing and co-management schemes with CFAs ⇒ Support for communities on Income Generating Activities (IGAs) and business skills ⇒ Improving skills of KFS staff in PFM ⇒ Building capacity of prosecutors to argue for heavier penalties of forest related crime ⇒ Identification, collection and storage of genetic resources ⇒ Capacity to identify, assess impact, and mitigate impact of GMOs and biotechnology
<ul style="list-style-type: none"> <li>Narok County Council (NCC)</li> </ul>	⇒ Conservation of the natural resources within the Maasai Mau and Maasai Mara National Reserve	⇒ Security patrols – to protect both visitors and wildlife ⇒ Limited capacity to collect and account for revenues and put some back to conservation; ⇒ Limited capacity to deal with human-wildlife conflicts ⇒ Liaison with other stakeholders – KWS, NGOs, lodges and camps	⇒ Revenue collection and accountability ⇒ Benefits sharing with communities ⇒ Capacity to review EIAs and Audits and ensure compliance ⇒ Skills in integrated management of natural resources ⇒ Skills on participatory forest management for forest guards ⇒ Skills in habitat management and biodiversity conservation ⇒ Skills in wildlife management for forest guards ⇒ Capacity in GIS – only use GPS for rhino surveillance ⇒ Capacity on tourism development in both MMNR and Maasai Mau – identification of sites in both the community areas and reserve for advertisement to private sector develop ⇒ Capacity to assist in development of conservancies in the community areas
<ul style="list-style-type: none"> <li>Transmara County Council (TCC)</li> </ul>	⇒ Managing the Mara Triangle part of the Maasai Mara National Reserve	⇒ No capacity in management of NRM – TCC has contracted Mara Conservancy ⇒ Involved in the process of developing Maasai Mara Management Plan	⇒ Skills in integrated natural resources management ⇒ Capacity to promote sustainable eco-tourism ⇒ Capacity in conflict resolution ⇒ Capacity in GIS – only use GPS for rhino surveillance ⇒ Capacity on tourism development in both MMNR and Maasai Mau – identification of sites in both the community areas and reserve for advertisement to private sector develop ⇒ Capacity to assist in development of conservancies in the community areas ⇒ Benefits sharing with communities ⇒ Capacity to review EIAs and Audits and ensure compliance ⇒ Skills in integrated management of natural resources ⇒ Skills on participatory forest management for forest guards ⇒ Skills in habitat management and biodiversity conservation
<ul style="list-style-type: none"> <li>Kenya Wildlife Service (KWS)</li> </ul>	⇒ To conserve and manage wildlife in Kenya	⇒ Dealing with human-wildlife conflicts ⇒ Patrols in and outside the protected areas ⇒ Research in MMNR ⇒ Law enforcement especially in the Maasai Mau and Mau Complex in general ⇒ Undertaking	⇒ Need training on issues of water management as they affect wildlife ⇒ Integrated resources management capacity especially with regard to water and even forestry ⇒ Capacity building in water monitoring – KWS should have laboratory ⇒ Undertaking research in the Maasai Mau ⇒ Identification, collection and storage of genetic resources ⇒ Capacity to identify, assess impact, and mitigate

Institutions	Mandate/Responsibility	Existing Capacity	Specific Capacity Needs
		community awareness creation and education ⇒ Undertaking community projects e.g. water, dams, schools ⇒ Supporting existing conservancies ⇒ Review of EIAs	impact of GMOs and biotechnology
<ul style="list-style-type: none"> <li>Water Resource Management Authority (WRMA)</li> </ul>	⇒ Monitor, conserve, and manage the water resources and catchment areas sustainably	⇒ Limited capacity to monitor water quality and quantity ⇒ Management of water resources ⇒ Revenue Collection ⇒ Enforcement ⇒ Training and formation of WRUAs	⇒ Training: Integrated Water Resources Management, Community Mobilization/Conflict Management, GIS and Remote Sensing, Data Management ⇒ Facilities: Laboratory for water analysis, GIS equipment, establishment of data center ⇒ Monitoring: Rehabilitation of River gauging stations, Provision of Motor Bike to facilitate in collection of data, acquisition of modern data capturing tools. ⇒ Development of a River Basin Management Plan, and Communication Strategy ⇒ Capacity to train WRUAs ⇒ Capacity to assist WRUAs accrue benefits from conservation work ⇒ Payment for Environmental Services and Benefits sharing
<b>Tanzania</b>			
<ul style="list-style-type: none"> <li>District Councils:-</li> <li>Tarime</li> <li>Rorya</li> <li>Musoma</li> <li>Serengeti</li> </ul>	⇒ Coordination of Natural Resources Management and agricultural activities ⇒ Control the number of livestock; ⇒ Management of forests and wildlife; ⇒ Ensuring public health; ⇒ Solid and liquid waste management ⇒ Enforcement of fisheries laws, monitoring and control of fishery activities ⇒ Controlling soil erosion	⇒ Limited capacity in Natural Resource Management ⇒ Limited capacity in Fisheries ⇒ Limited capacity in Wildlife ⇒ Limited capacity in Forestry and Beekeeping ⇒ Limited capacity in Implementing Participatory Forest Management	⇒ Training in integrated natural resources management ⇒ Training in participatory planning and formulation of management plans ⇒ Training in management of fisheries including fish farming; ⇒ Capacity building to promote sustainable ecotourism and resolve conflicts ⇒ Formulation of bylaws and their enforcement
<ul style="list-style-type: none"> <li>Ministry of Water and Irrigation- Lake Victoria Basin Water Office (Musoma)</li> </ul>	⇒ Overall management of water resources including formulation of policies in the water sector.	⇒ Issuance of water licenses ⇒ Enforcement of Water Act 1972, ⇒ Issue water rights, ⇒ Discharge effluent assessment and permit, ⇒ Collection analysis and storage of data, ⇒ Collection of water users fees, ⇒ Conflict management	⇒ Measurements of water quality and volume ⇒ Coordination with other players in the water sector such as TBWUAs ⇒ Laboratory supplies ⇒ Skills in policy formulation ⇒ Skills in Programme coordination and monitoring ⇒ Skills on integrated water resource management
<ul style="list-style-type: none"> <li>Tanzania National Parks – TANAPA and Serengeti National Park (SNP)</li> </ul>	⇒ Management of Serengeti National Parks in Tanzania. ⇒ Protection of Wildlife in the park. ⇒ Safeguard Serengeti Ecosystem	⇒ Water quality and quantity monitoring ⇒ Ecosystem Management ⇒ Natural Resource Management ⇒ Protection of Wildlife	⇒ Need training on issues of water management as they affect wildlife ⇒ Integrated resources management capacity especially with regard to water and even forestry ⇒ Innovation in relation to investments in the national parks ⇒ Training of Scouts



Institutions	Mandate/Responsibility	Existing Capacity	Specific Capacity Needs
	from Water flows collapse and ensuring that it survives based on regular supply of water to the ecosystem	⇒ Collects data on water flow especially in the dry season on the Mara River; ⇒ Development of General Management Plan for Serengeti National Park ⇒ Visitor education ⇒ Ensures hotel facilities adhere to environmental requirements including EIA, and non- abstraction of surface water	⇒ Prosecution of illegal cases of poaching etc ⇒ Infrastructure Development ⇒ Harmonization of policies between Mara and Serengeti ⇒ Capacity in monitoring of water flows and pollution ⇒ Training of honorary wardens ⇒ Management of livestock

#### 4. Capacity and Linkage Recommendations

To fill the capacity needs identified, the following programs were recommended for the various institutions

Capacity Building Programme	Duration/Nature of Programme
1. Integrated Natural Resources Management	Medium term 1 – 2 years
2. Training of Trainers (ToT) on Group dynamics, governance, conflict resolution, negotiations	Short term – 3 months
3. Tourism Development and Planning	Medium term – 1-2 years
4. Water Resources Management	Medium term 1 – 2 years
5. Participatory Project Planning and Implementation	Short term – 3 months
6. Benefits sharing from natural resources management	Short term – 3 months
7. Collection and Storage of genetic materials	Medium term 1 year
8. Identification, Impacts Assessment and Mitigation of Genetically Modified Organisms and Biotechnology	Medium term 1 year
9. Training of Trainers (ToT) on wildlife management	Short term – 3 months
10. Training of Trainers (ToT) on Participatory Forest Management	Short term – 3 months
11. Training of Payment of Environmental Services Schemes (PES)	Short term – 3 months
12. Training of Trainers on reading of water monitoring equipment and reporting	Short term – 3 months
13. Training of Trainers on entrepreneurship and business planning in NRM	Short term – 3 months
14. Computers and accessories	

Various linkages were also recommended between the different groups. Linkages were to take the form of:-

- Technical Advisory Committees
- Formulation and implementation of participatory management plans
- Joint Implementation Units/Committees/Plans for management of natural resources
- Forums for information and experience sharing
- Establishment of Focal persons/points for linkage with other institutions
- Undertaking research and disseminating findings to local institutions

# **1. INTRODUCTION**

## **1.1. Background**

This report deals with the Natural Resources Management Institutional Needs Assessment of the Mara River Basin. The assessment was undertaken by Kamfor Company Limited between 20<sup>th</sup> July and 31<sup>st</sup> August 2010.

The report gives an inventory of the institutions dealing with natural resources management and a detailed assessment of the capacities to fulfill their mandates. The report also gives the Strengths, Weakness, Opportunities, and Threats of the key institutions dealing with Natural Resources Management, in the areas of forestry, wildlife, and water resources, in the Mara River Basin, in both Kenya and Tanzania. The report further gives recommendations on how to fill their capacity gaps including a comprehensive action plan for capacity building inclusive of estimated costs and duration.

## **1.2 The Mara River Basin**

The Mara River Basin, MRB, is an ecosystem rich in natural resources, both flora and fauna. It is 13,750 km<sup>2</sup> of which 65% is in Kenya and 35% in Tanzania. The MRB is part of the larger Lake Victoria Basin and thus falls under both the Lake Victoria Basin Commission, and the Lake Victoria Environmental Management Programme who are involved in Natural Resources Management (NRM) issues in the larger basin.

The Mara River is about 395 Kms long, and has five principal tributaries, namely, Nyangores River, Amala River, Sand River, Talek River, and Borogonja River. The basin itself can be divided into four distinct sections, mainly on the basis of the location along the main river:

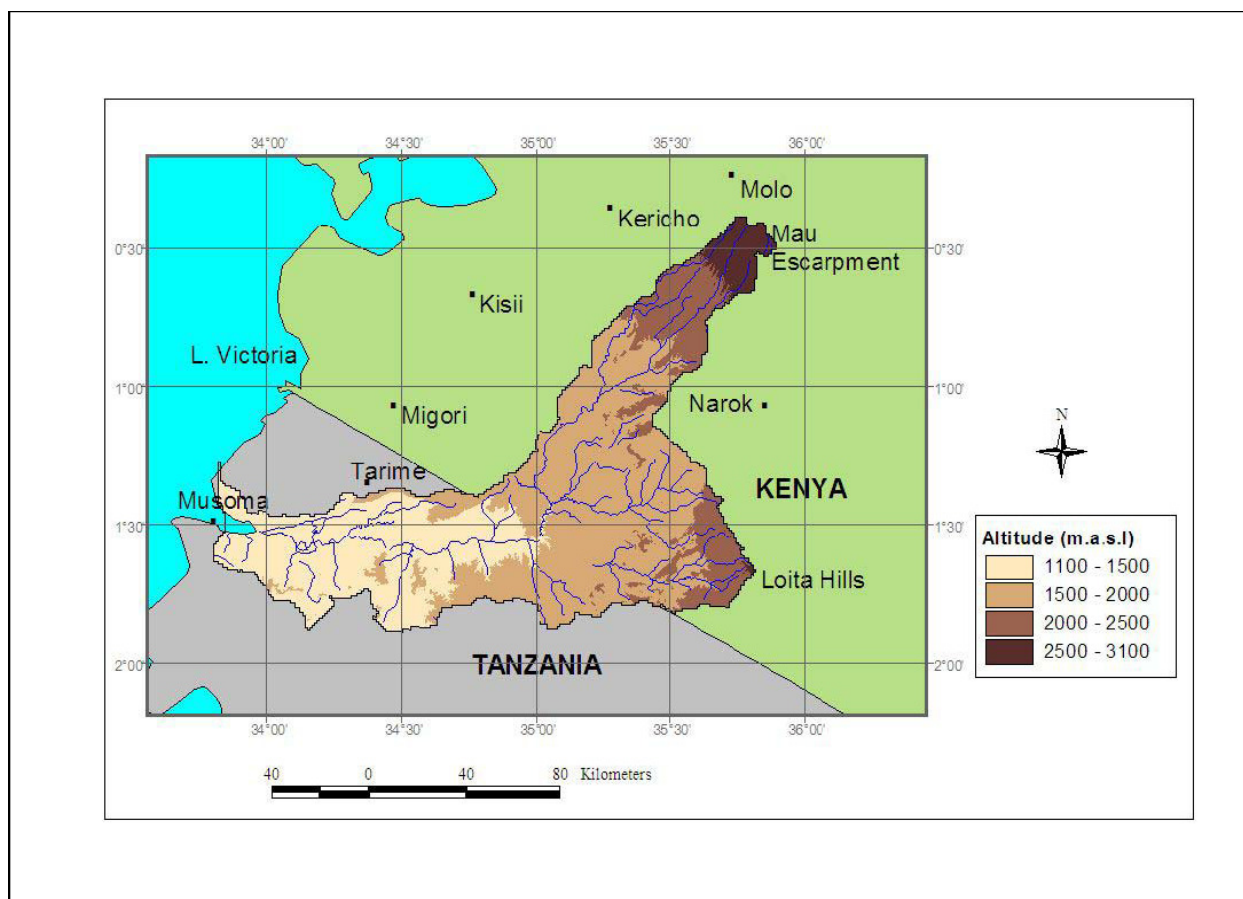
- a) The forested Mau escarpment (in Kenya, about 2,900 metres above sea level) where the river begins;
- b) The large scale agricultural farms (in Kenya);
- c) The open savannah grass lands (most of which are protected territories in both countries);
- d) The flood plains (which are in Tanzania and are about 1100 metres above sea level) and which also includes swamps and wetlands.

With regard to critical ecosystems, there are three main types, namely:

- i. The Mau Forest and the Mara Riverine Forest;
- ii. The Serengeti-Maasai Mara Ecosystem; and

- iii. The Aquatic habitats of the Mara River, which consist of the river and the Mara swamp.

**Figure 1.1: The Mara River Basin Map**



Source: WREM Inc. - study for Mara Investment Strategy commissioned by NELSAP/Mara RBM

The MRB is rich in natural resources. The forest ecosystems provide firewood, timber, poles, fodder, medicines and habitats for wildlife, and subsequently tourism; the savannah ecosystems provides habitat for wildlife, and the MRB is an international tourism asset with one of the highest species diversity of large herbivores in the world; while the aquatic ecosystems provide both water for livelihoods, agriculture, and fisheries. Additionally all the ecosystems provide critical ecosystem services like water catchments, mitigation of soil erosion, mitigation of climate change, water purification and storage, water recharge, sediment trapping and nutrient cycling.

With all these attributes, the MRB is an important support to livelihoods, both in form of food and income. In this regard, the basin supports about 1.3 million persons. Key livelihood activities in the MRB include:

- a) Large scale farmers with irrigated agriculture (Kenya)
- b) Small scale farmers (Kenya and Tanzania)
- c) Tourism (Kenya and Tanzania)
- d) Pastoralists (Kenya and Tanzania)
- e) Mining (small/large scale) (Tanzania)
- f) Fishing (Tanzania)

Despite its richness and importance, the Mara River Basin is under threat, mostly as a result of anthropogenic activities. Key challenges experienced include: water shortages, water pollution, loss of native forest cover in the Mau escarpment and also along the riverine forests, mushrooming tourist facilities, unsustainable expansion of agriculture (including irrigated agriculture), over-abstraction of water for irrigation and industries, fires, loss of biodiversity, habitat loss and modification, overgrazing, illegal hunting, poaching, and resource use conflicts – mainly water based. All these factors affect the livelihoods of the communities including food security, cause of ill health, and overall, affects the natural resource base itself and the two important protected areas, the Maasai Mara and the Serengeti, which are premiere tourist attractions due to their pristine ecosystems.

On the positive side, communities, through various community groups, Non-Governmental Organizations (NGOs), government and private institutions have been actively involved in natural resources management. However, efforts by various players have been un-coordinated, and the capacity of the various groups also needs to be built for them to adequately manage their resources. To respond to these challenges, the Lake Victoria Basin Commission has initiated the Trans-boundary Water for Biodiversity and Human Health Mara River Basin Project

### **1.3 Trans-boundary Water for Biodiversity and Human Health Mara River Basin ((Twb-Mrb) Project**

The Trans-boundary Water For Biodiversity and Human Health Mara River Basin (Twb-Mrb) Project is being implemented by the East African Community - Lake Basin Commission in the Mara River Basin in both Kenya and Tanzania. The project is funded by the United States of America through United States Agency for International Development, USAID. The overall objective of the project is to promote harmonized Mara River Basin management practices for sustainability.

The specific objectives are to:

- a) Develop and promote the implementation of an appropriate trans-boundary management framework for Mara River Basin;

- b) Improve the protection and management of Maasai Mau Forest Blocks resources and Mara riverine forests;
- c) Enhance sustainable management of the protected areas of Maasai Mara and Serengeti ecosystems;
- d) Improve water resources management in the basin; and
- e) Enhance institutional capacity of the Lake Victoria Basin Commission to undertake its regional mandate

To realize these objectives, the various players and actors in the MRB need to be coordinated so that their efforts are geared towards the same goal, namely, the sustainable management of the eco-system. To achieve this, the capacity of the various players needs to be built up, and this capacity assessment will serve as a first step towards developing a program to build capacities in matters of natural resources management. The assessment will also assist streamline their activities and operation to gain synergy among the different institutions, groups, and stakeholders.

As a first step towards streamlining the management of these resources, this study aimed at assessing the capacity needs and gaps of NRM institutions. It forms the basis for capacity building of the institutions that support management of natural resources in the MRB.

#### **1.4 Objectives of the Assignment and Scope of Work**

The specific objective of the consultancy was to assess the capacity needs of the NRM institutions, and to recommend capacity building requirements, including an implementation plan.

The specific tasks of the assignment were:-

- a) Carry out inventory of NRM institutions in MRB;
- b) Assess the NRM Institutions roles, mandate and functions to manage natural resources in Mara River Basin;
- c) Assess the linkages between institutions and their coordination;
- d) Propose appropriate institutional coordination mechanism to maximize efficiency;
- e) Identify capacity gaps in the different institutions; and
- f) Prepare a comprehensive action plan for capacity building

## **2. DETAILED METHODOLOGY FOR THE STUDY**

### **2.1 Approach**

The approach used tried to respond to the scope of work and activities given in the terms of reference. The assessment thus focused on the mandates of the various institutions, and how they were meeting them. The assessment also identified institutional capacity and compared the delivery of the mandate with the institutional capacity existing in the institutions to analyse the capacity gaps. Finally, the assessment identified a prioritised list of recommendations to address the main capacity gaps.

### **2.2 Discussions with the Client**

Discussions with the client were maintained over the entire period of the assignment. In line with the practice in our firm, we were available for occasional follow-up consultations and advice on any issues that emerged from the study as and when requested by the client.

### **2.3 Identification of Data Requirements for the Study**

To meet the terms of reference, the consultant identified data requirements and sources of data as listed below:-

<b>Task</b>	<b>Data Required</b>	<b>Source of Data</b>
1. Identification of all institutions and stakeholders	Names and contacts of institutions dealing with forestry, wildlife, and water resources management	Literature review; client; internet; key informant interviews
2. Assessing and determining the roles, mandates, and functions of these institutions and stakeholders;	Mandates and function of institutions	Individual and group interviews; discussions; literature review of institutional documentation
3. Assessing the capacity of institutions to meet their mandates	Activities undertaken by the institutions to meet their mandates; activities not undertaken due to lack of capacity; capacity gaps; challenges and limitations; SWOT analysis	Individual and group interviews;
4. Assessing whether any linkages exist among the institutions and how they work;	Institutional linkages – what exists and what is lacking; overlapping roles and activities; challenges on linkages; transboundary linkages	Individual and group interviews;
5. Recommending how best to form linkages and synergy among the different players;	Best practices; policies; legal aspects	Literature review; data analysis
6. Formulating a	Capacity building gaps; existing	Data analysis

comprehensive action plan for capacity building and linkages creation.	linkages; best practices; capacity response options; costs and timelines for filling gaps and creating linkages	
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## 2.4 Literature Review

The team of consultants undertook a thorough review and objective assessment of all literature and documentation received from the client and other publicly available data and information.

## 2.5 Identification of Stakeholders

The consultants identified the key institutions dealing with the management of forests, wildlife and water resources both in Kenya and Tanzania. Institutions were selected on the basis of having legal mandate, obligations, and responsibilities in undertaking natural resources management in the areas of forestry, wildlife and water resources. As such, the institutions identified were mainly government departments, local authorities, and parastatals, and these formed the units of analysis in this assignment. Additionally, other stakeholders working in the area of natural resources management, but with no binding mandates, in the basin were identified. Officers from the respective institutions were targeted for interviews either individually, or where possible in groups. Key institutions and stakeholders identified were:-

Institutions and Stakeholders in Kenya	Institutions and Stakeholders in Tanzania
<b>Institutions</b>	
1. Ministry of Environment and Natural Resources (MENR) – Mau Coordinating Secretariat (coordinated by Prime Ministers Office (PM))	1. Ministry of Natural Resources and Tourism
2. National Environmental Management Authority (NEMA)	2. District Council of Tarime (DCT)
3. Kenya Forest Service (KFS)	3. District Council of Rorya (DCR)
4. Narok County Council (NCC)	4. District Council of Musoma (DCM)
5. Transmara County Council (TCC)	5. District Council of Serengeti (DCS)
6. Kenya Wildlife Service (KWS)	6. Ministry of Water – Lake Victoria Basin Water Office (Musoma)
7. Ministry of Tourism (MoT)	7. Tanzania National Parks – TANAPA
8. Water Resource Management Authority (WRMA)	8. National Environment Management Council (NEMC)
9. Kenya Forest Research Institute	9. Tanzania Wildlife Research Institute (TAWIRI)
<b>Stakeholders</b>	
1. WWF-EARPO - Kenya, Mara River Basin Initiative	1. WWF-EARPO – Tanzania , Mara River Basin Initiative
2. NBI-NELSAP	2. NBI-NELSAP
3. Trans-boundary Water Users Forum (TBWUF= 7 )	3. Trans-boundary Water Users Forum (TBWUF)

<b>Institutions and Stakeholders in Kenya</b>	<b>Institutions and Stakeholders in Tanzania</b>
4. Lake Victoria Environmental Management Project (LVEMP)	4. Lake Victoria Environmental Management Project (LVEMP)
5. Ewaso Ngiro South Development Authority (ENSDA),	5. SCC Vi Agroforestry
6. WWF Mau Forest Conservation Project (MFCP)	6. Ikorongo Game Reserve (IGR)
7. Kenya Forests Working Group (KFWG)	7. Serengeti-Luangwa Ecosystem Management Project.(SLEMP)
8. Community Based Integrated Forest Resources Conservation and Management (COMIFORM)	8. Frankfurt Zoological Society (FZS),
9. Green Belt Movement (GBM)	9. Ecosystem Management Project (EMP)
10. Community Forest Associations including National Alliance of Community Forest Associations, Masese Nyangores Community Forest Association, Amalo Nairota Community Forest Association, Olenguruone Community Forest Association	10. Mara River Catchment Committee (MRCC)
11. Timsales Ltd.	11. Catchment Area Committees (CAC)
12. Mara Conservancy (MC)	12. Beach Management Units (BMUs)
13. East African Wildlife Society (EAWS)	
14. Ministry of Tourism (MoT)	
15. National Museums of Kenya (NMK)	
16. Integrated Conservation and Development Projects (ICDPs)	
17. Mara River Water Resource Users Association (MRWUA)	
18. Lake Victoria South Catchment Management Authority (LVSCMA)	

## **2.6 Preparation of Data Collection Tools**

The consultant prepared a semi-structured questionnaire for field data collection. See Appendix 2. The tool was designed to capture the mandates, roles, and functions of the different institutions; the activities they currently undertake to meet their mandates; activities they should be undertaking but were not due to capacity constraints; other limitations and challenges; linkages with other institutions and stakeholders; and their strengths, weaknesses, opportunities and threats. For the SWOT analysis, triangulation of information from different persons in the same institution was done.



## **2.7 Field visits**

Field visits were undertaken in the MRB to meet with officers in the identified institutions and other stakeholders. All the identified institutions were visited and individual (and group) interviews undertaken.

## **2.8 Data and SWOT Analysis**

Each of the institutions was evaluated with regard to how they are meeting their institutional mandates in the MRB. The analysis tried to determine what capacities exist, and the additional capacity to fully meet the institutional mandates and also be able to take up opportunities that exist with regard to natural resources management. The capacity assessment also critically looked at the structure and systems of the institutions; its human resources with regard to skills and knowledge; and its infrastructure/facilities.

The SWOT exercise involved the analysis of the Strengths, Weaknesses, Opportunities and Threats of the various institutions. Strengths and weaknesses are mainly internal to the organization, while opportunities and threats are external. The Consultant evaluated how well the mandates, structures, functions and work, can better be coordinated and proposes what needs to be done to build on the strengths and eliminate weaknesses.

## **2.9 Comprehensive Action Plan**

This section describes how the various gaps identified would be filled through an institutional capacity building and linkages creation programme. This involved identifying best means of reaching objectives, evaluating them and selecting the most appropriate strategy. Evaluation and selection of the strategy was also influenced by available resources. As such prioritization of actions was based on least input with maximum impacts. The overall plan contains action programmes, which are short, medium or long term. The comprehensive plan also has estimated budgets.

## **2.10 Reporting**

As per the Terms of Reference, the consultant prepared:-

- 1) An Inception Report
- 2) A Draft Report; and
- 3) A Final Report.



### **3. ROLES, MANDATES AND FUNCTIONS OF INSTITUTIONS AND STAKEHOLDERS TO MANAGE NATURAL RESOURCES IN MARA RIVER BASIN**

#### **3.1 Introduction**

This chapter deals with the legal mandates of the institutions and stakeholders identified as being key in the management of natural resources in the MRB. The institutions identified are mainly involved in the management of forests, water, and wildlife resources in the basin. The identification of the roles and mandates of the institutions was important in determining whether there were any capacity gaps in meeting their mandates in the MRB.

#### **INSTITUTIONS**

#### **3.2 Ministry of Environment and Mineral Resources**

The Ministry of Environment and Natural Resources (MEMR) was established in 2008, and comprises of four key departments namely National Environment Management Authority, Department of Resources Surveys, Mines and Geological Department, and the Kenya Meteorological Department.

##### **Institutional presence in MRB**

In the Mara River Basin, the Ministry fulfills its mandate through the National Environmental Management Authority (NEMA). The Ministry is involved in the restoration of the Mau forest, which is the source of the Mara River, under the Mau Forests Complex Programme.

##### **Legal mandate in relation to MRB**

The ministry is mandated to protect, conserve and manage the environment and natural resources through sustainable exploitation for socio-economic development aimed at eradication of poverty, improving living standards, and ensuring a clean sustainable environment.

##### **Role and functions in MRB**

Its key functions include: monitoring and coordinating environmental activities and enforcing compliance with environmental regulations and guidelines, and formulating environment and natural resources policy.

The key challenges in the Ministry is meeting its mandate are with regard to policy formulation, institutionalization and implementation of policies once formulated.

### **3.3 National Environment Management Authority**

NEMA was established under the Environmental Management and Coordination Act.

The mandate of NEMA is to “ exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment”

The functions of NEMA under the Act are:

- Coordination of the various environmental management activities being undertaken by the lead agencies and promote the integration of environmental considerations;
- Prepare and issue an annual report on the state of the environment in Kenya;
- Monitor and assess activities, including activities being carried out by relevant lead agencies, in order to ensure that the environment is not degraded by such activities;
  
- Public education and awareness creation on environmental matters
- Compliance and enforcement of environmental legislation
- Enhancement of the effectiveness of the Provincial and District Environment Committees;
- Development of linkages involving the private sector, inter-governmental organizations, non-governmental organizations and government agencies of other states, on issues related to the environment; and
- Coordination and development of the necessary capacity for environmental management.

In the MRB, NEMA has established offices in Narok South, Bomet, Elburgon and Transmara Districts to coordinate and enhance environment related activities in the Districts. NEMA has also been involved in the enforcement of environmental regulations in the MRB especially with regard to ensuring that tourist facilities both within the National Reserve and the group ranches undertake environmental impact assessments and audits; enforcing improvement orders; and in promoting proper wastes (both solid and water) management especially from the tourist facilities.

### **Challenges in fulfilling mandate:-**

- The new offices lack computers, telephone facilities, vehicles, and rely on other government institutions for mobility.
- There is insufficient training of the District Environment Officers and inadequate levels of awareness among the District Environment Committees (DECs).
- Inadequate personnel, financial and human resources
- Inadequate facilities and equipment (Inadequate office space)
- Inadequate inter-sectoral mechanisms for environmental coordination
- Weak political goodwill from politicians
- Untimely disbursement of funds
- Lack of harmonization of sectoral laws with EMCA leading to perceived conflicts of mandate
- Performance contract affects linkages as officers focus on their mandates
- Failure by lead agencies to carry out their mandates
- Inadequate awareness of NEMA's mandate

**Linkages:** NEMA works in collaboration with other government institutions within the Mara River Basin. Structures extending to grassroots level through provincial and district offices and committees

NEMA is also a focal point to several multilateral environmental agreements (MEAs) such as climate change, biodiversity, etc. At the local level, NEMA also collaborates and partners in environmental management with a wide range of institutions including United Nations agencies, multilateral and bilateral agencies, non-governmental organizations (NGOs) and the private sector.

### **3.4 Kenya Forest Service**

The Kenya Forest Service is a state Corporation and was created under the Forest Act 2005. It replaced the former Forest Department. The mandate of KFS is to conserve, develop, and sustainably manage forestry resources.

The mandate of the KFS under the Forest Act expands the mandate of the institution for forestry development to cover all forests on state, local authority, and private land. Hitherto, the institutions (then the forest department) only managed state forest. The participation of other stakeholders in management of forest resources is also recognized in the new Act.

To meet its mandate, the KFS is involved in the following programs:

- Natural forests conservation and sustainable management;
- Farm forestry;
- Dryland forestry; and
- Industrial forests plantations development and sustainable management of exotic plantations.

In the MRB, the main activities of KFS include:

- Creating environmental awareness especially with regard to tree and forests;
- Training community groups e.g. Community Forest Associations (CFAs) and Water Resources Users Associations (WRUAs);
- Nurseries establishment;
- Riverine Planting along the Mara river – 5 kms done
- Supporting schools set up their own tree nurseries;
- Conservation and management of natural forests in the Mau complex;
- Forest patrols;
- Formation of CFAs – one in each of the forest blocks – 3 formed so far, namely Nairota, Nyangores and Ol Posimoru ;

#### **Challenges in fulfilling mandate:-**

- Inadequate staff to protect existing forest resources
- Inadequate funds for clearing, planting trees and undertaking silviculture activities
- Inadequate transport facilities (vehicles and their maintenance)
- Lack of communication facilities
- Encroachment of forests and irregular allocation of forest land
- Low CFA formation: Out of possible 22, only 3 formed and another 3 being formed
- Low capacity of CFAs especially in Participatory Forest Management (PFM)
- Some staff are under the Ministry of Forests and Wildlife while some are under KFS and this affects staff morale.
- CFAs do not understand their roles, in management of the forests, as they are not able to protect illegal activities
- Lack of management plans for Mau forest
- No trained community scouts in Mau forest
- Specific Environmental Social Impact Assessment for Mau forest has not been done.
- Provincial administration, police, Judiciary not conversant with nature and extent of environmental crimes.

**Linkages:** The KFS works with the formed associations (CFAS and WRUAs); WWF; Green Zones Development Corporation; and the Green Belt Movement. It also supports the work of the Narok County Council in the Maasai Mau. Green zones supports forest patrols and has given KFS two vehicles. Mobility is however difficult due to poor infrastructure.

Other linkages are with KWS and the provincial administration, NEMA, Ministry of Agriculture, and Ministry of Water. KFS has linkages with private partners such as Timsales, and Comply who support forest rehabilitation, plantation establishment, and management. The partners also assist in pitting, transport, and road rehabilitation when need arises.

### **3.5 Narok County Council (NCC)**

Narok County Council is the local authority which manages both the Maasai Mara National Reserve (MMNR) and the Maasai Mau (MM) Forest.

The Mandate of the Council is the conservation of the natural resources within the two habitats, and also among the community areas. As such, the mandate includes management of wildlife and forest resources in the two ecosystems.

To fulfill this mandate, the NCC is currently undertaking the following tasks:-

- Security patrols – to protect both visitors and wildlife
- Liaison with other stakeholders – KWS, NGOs, lodges and camps
- Fire management
- Closing off some areas for natural recovery and regeneration
- Marking out of boundaries
- Contributing to joint Mau operation force – 40 rangers and one vehicle
- Getting title deed for Maasai Mau

#### **Challenges in fulfilling mandate:-**

- Managing land-use changes in the community areas
- Preventing illegal exploitation of the forest resources and settlements;
- Coping with forest fires
- Coping with poaching
- Control of mushrooming tourist facilities within the protected and community areas
- Collection and accountability of revenues from the park
- Involvement of communities in management of the Maasai Mau especially due to boundary disputes and fear of evictions.

**Linkages:** The NCC has links with the Kenya Wildlife Service (KWS) and the Serengeti National Park (including Serengeti Research Station) with respect to joint security operations, research information, and on Rhino surveillance. Information sharing is mainly with regards to animal counts of large mammals.

The NCC also has linkages with the KWS on provision of veterinary services which are sponsored by the Sheldrick Foundation. Other linkages are with respect to human wildlife conflicts

NCC also has linkages with the KFS and ICS on the rehabilitation and general management of the Maasai Mau. Other partners on the management of the Maasai Mau include the GBM, ENSDA, and the COMIFORM project. The KFWG has also been a partner in preparing a 10 year Strategic Plan for the Maasai Mau.

For the rhino project, the NCC has linkages with Friends of Conservation and the Frankfurt Zoological Society who have supported them with surveillance vehicles and also undertakes vegetation analysis.

### **3.6 Transmara County Council (TCC)**

Trans Mara County Council has the role of managing the Mara Triangle part of the Maasai Mara National Reserve.

To fulfill its mandate, the council has contracted the management of its part of the MMNR to Mara Conservancy. The main reason was lack of capacity in the council to manage the resource.

The Council (as an institution) is also involved in the process of developing Maasai Mara Management Plan for the greater Mara conservation area in collaboration with Narok County Council, African Wildlife Foundation, and Mara Conservancy among others.

#### **Challenges in fulfilling mandate:-**

- Human-wildlife conflict mainly because local communities do not have clear incentives for conserving wildlife in the face of declining grazing and water resources
- Benefits sharing: Although the MMNR generates large revenues from tourism, benefits have not been ploughed back to the communities living around the reserve primarily due to poor management.
- Poor infrastructure and untrained human resource



- Management of the community areas
- Management of resource use conflicts: Conflict over access to pasture is rife in the district especially between the sedentary farming communities and the pastoralists.

### **3.7 Kenya Wildlife Service**

Kenya Wildlife Service (KWS) is a State Corporation established by the Wildlife (Conservation and Management) Act, CAP 376 and the Wildlife (Conservation and Management) (Amendment) Act no. 16 of 1989. The two Acts provide for the establishment of national parks and national reserves and define how they are to be managed.

The overall mandate of KWS is to conserve and manage wildlife in Kenya. It's key responsibilities are:

- Sole jurisdiction over National parks
- Supervisory role in the management of National Reserves, Local and Private Sanctuaries
- License, control and supervision of all wildlife conservation and management activities outside the protected areas
- Conservation Education and Training
- Wildlife Research

The role of KWS also includes the management and protection of important and critical water catchments areas. KWS also has an additional role of protection and restoration of the Mau forest and also controls 125 game stations outside protected areas. KWS also plays a role in formulation and implementation of strategies for tourism and the sustainable exploitation of natural resources.

To fulfill its mandate in the MRB, KWS undertakes the following:-

- Management of human- wildlife conflicts;
- Patrols in and outside the protected areas;
- Research – both inside the MMNR and in the community areas in the areas of animal counts/census; and vegetation monitoring – including vegetation monitoring and changes
- Law enforcement especially in the Maasai Mau and Mau Complex in general. KWS has given over 60 rangers, and 6 vehicles for patrolling of the Mau Complex to the Interim Coordination Secretariat (ICS) on the Mau Forest Mau

- Undertaking community awareness – KWS has honorary wardens to educate communities
- Undertaking community projects e.g. water provision, building of dams and schools
- Supporting existing conservancies with technical skills e.g. Koiyaki and Lemek
- Review of EIAs for lodges and camps – tourist facilities

#### **Challenges in fulfilling mandate:**

- Handling cases of human-wildlife conflicts with the elephant being the main problem animal. There are incidences on almost daily basis and injuries reported every month. Other losses include livestock and crop losses. Conflicts sometimes result in animals being killed
- Control of anthropogenic activities like charcoal burning and agriculture especially in the community areas
- Monitoring water quality as it impacts on wildlife
- Collection and storage of genetic resources
- Dealing with Genetically Modified Organisms and Biotechnology

**Linkages:** The KWS has linkages with the NCC in the management of the MMNR. The KWS supports the NCC with the rhino surveillance and also staffs the Veterinary Unit within the MMNR. Logistical support for the Veterinary unit is given by the Sheldrick Foundation. With NCC, the KWS also shares research findings. KWS also has linkages with TANAPA and have joint meetings quarterly

Other linkages are with WWF, AWF, Friends of Conservation, KFWG and most are with respect to information sharing. This is done mainly through meetings and workshops. KWS has also participated in the ongoing development of a management plan for the MMNR.

### **3.8 Ministry of Tourism (MoT)**

The Ministry of Tourism is responsible for the formulation, coordination and administration of policy in respect to the tourism sector. The mandate of the ministry is to make Kenya a destination of choice and to facilitate sustainable tourism development. The Ministry has an office in Nakuru with four officers who are in charge of the Central and South Rift.

To fulfill its mandate in the Mara River Basin, the Ministry of Tourism is involved in:-

- Licensing of tour operators
- Licensing of lodges and camps
- Grading of lodges and camps which includes environmental aspects
- Inspection of lodges and camps
- Review of EIAs
- Attend provincial environmental meetings where all applications made for hotels and lodges are reviewed
- Development of EIA guidelines for the tourism sector – the guidelines have however not been gazetted

**Linkages:-** The Ministry has linkages with the Kenya Tourist Board on tourism promotion; the Kenya Tourist Development Corporation for facilities development; NEMA on review of EIAs; and NCC on licensing of lodges. The MoT also works closely with the Tourism Trust Fund and Eco-tourism Kenya to support local communities in coming up with tourism projects and facilities that are environmentally friendly.

#### **Challenges in fulfilling mandates:**

- Low capacity in review of EIAs and EAs at Regional MoT offices
- Low capacity in undertaking of environmental audits (audits proper and for grading purposes)

### **3.9 Water Resource Management Authority (WRMA)**

Water Resources Management Authority (WRMA) is mandated to monitor, conserve, and manage the water resources and catchment areas sustainably. The regional office for Lake Victoria South Catchment Area is located in Kisumu, and the sub-regional office, which oversees Mara River Basin, is located in Kericho.

The functions of WRMA include:-

- To develop and implement water allocation plans for equitable and sustainable water use
- To establish efficient water resources monitoring networks and improve Water Resources Information Systems (WRIS)
- To streamline and strengthen legislative provisions for enhancement of Water Resources Management (WRM)
- To develop water resources infrastructure for enhancement of water storage
- To implement policies and develop mechanisms that improve water availability

- To develop and strengthen financing policies and mechanisms to sustain catchment management.
- To restore degraded water catchment areas and control water pollution
- To develop and implement mechanisms that mainstream cross-cutting issues (climate change, corruption prevention, gender parity, HIV/AIDS and governance)

In the MRB, the role of WRMA sub regional office is to monitor water resources, administer water resources regulations, in terms of water abstraction, and discharge permits. The regional office is responsible for establishment, of Water Resources Users Association (WRUAs), to enable water users participate in decision-making.

To fulfill its mandate, WRMA is currently working on allocation and apportionment of water, monitoring and assessment of water resources, receiving and determining water permit applications, monitoring and enforcing permit conditions, regulating and protecting water quality, and water catchment areas, as well as coordinating other stake holders in water resources management.

WRMA is also involved in formation of Water Resource Users Associations (WRUAs) in order to ensure that stakeholders participate in decision-making concerning management of water resources in sub-catchment areas. In this regard it has led to the establishment and registration of Mara River Water Users Association, and which has also been financially support through Water Resources Development Cycle.

### **Challenges in Meeting mandate**

- Lack of Regulations on water use e.g. abstraction, water pollution control
- Lack of Water Allocation plans
- Lack of Resource Quality Objectives
- Revenue collection on water use (currently not maximised)
- Weakness in the management of water rights
- Government institutions and stakeholders are reluctant to pay for water use as the resource is considered a public good
- Human resources issues (most staff of WRMA are still employees of the Ministry of Water and Irrigation and can be transferred any time without any reference to WRMA.
- WRMA is not well equipped to handle issues regarding land degradation as this requires training in integrated Natural Resource Management, or agriculture extension services.

- Lack of adequate staff and office space, laboratory, GIS equipment, remote sensing, conflict management, data management (collection, archival, retrieval, and analysis), to determine environmental flows

Lack of capacity to promote improvement in water management schemes, in terms of promoting bilateral cooperation in protection and sustainable use of water, policy development, awareness campaign, evaluating hydrological balance of the Mara River System.

**Linkages:** WRMA has linkages with various stakeholders involved in natural resources management within Mara River Basin. These linkages are very important in implementation of its mandate and overall management of the basin. Key among them is NEMA, KFS, Local Authorities, and WRUAs.

WRMA needs to enhance its linkages with Ministry of Agriculture, in terms of land use management, riverbank farming and protection in order to control issues of water pollution and sedimentation.

### **3.10 Kenya Forest Research Institute (KEFRI)**

- (i) KEFRI was established in 1986 under the Science and Technology Act (Cap 250). As a parastatal organization, it also operates under the State Corporations Act (Cap 446). KEFRI's mission is to enhance social and economic welfare of Kenyans through user-oriented research for sustainable development of forests and allied natural products.

Its national mandate comprises of four elements as follows:

- to conduct research in forestry;
- to co-operate with other research bodies conducting similar research within and outside Kenya;
  - (ii) to liaise with other organizations and institutions of higher learning in training and on matters of forestry research; and
  - (iii) to disseminate research findings.

To fulfil its mandate, KEFRI has four key programmes, namely:-

1. Farm Forestry programme
2. Natural Forests programme
3. Plantation Forestry

#### 4. Dry Lands Forestry

In the Mara, KEFRI undertakes research in natural forests, plantation forests, and farm forests vide the Londiani station.

##### **Challenges in meeting mandates**

- Dissemination of research findings especially to communities
- Production and distribution of sufficient amounts of seeds and seedlings
- Linkages with communities and local groups

#### **3.11 Tanzania Ministry of Natural Resources and Tourism (MNRT)**

The role of MNRT is to create an enabling environment as related to policy framework and the related investments. It is mandated to coordinate, and foresee all issues ranging from forests and wildlife Functions.

In the MRB, the Regional Natural Resources Department is mandated to control all Natural Resources Programmes. To do this, it is supported by clear legislation, policies, and strategies.

To meet its mandate, MNRT undertakes various NRM projects where it plays a role in supervision and implementation.

##### **Challenges in Meeting mandate:**

- Poor linkages among institutions
- Lack of adequate staff (numbers and technical competencies)
- Land-use changes leading to deforestation and siltation

#### **3.12 District Councils**

These include the district councils of Musoma, Tarime, Rorya, and Serengeti districts. They have the mandate to coordinate the management of natural resources and agricultural activities.

District councils are required to take the necessary measures to control soil erosion and desertification; to regulate the use of poisonous and noxious plants, drugs or poison; regulate and control the number of livestock; maintain forests; manage wildlife; ensure public health; provide effective solid and liquid waste management

protect open spaces and parks etc. With regard to fisheries, the districts are mandated to enforce fisheries laws, monitor, and control fishery activities.

### **Challenges in Meeting mandates**

- Lack of extension staff for forestry and environmental management
- Low awareness among local community, and the general public on environmental conservation issues
- Lack of extension staff for forestry, fisheries, water, and environmental management
- Lack of transport - vehicle and motorbikes
- Solid waste management in the districts leading to road runoff and eventual river pollution
- Over exploitation of fish stocks in the swamp
- Lack of incentive to contain degradation and conserve the environment and natural resources
- Weak Penalties and Incentives
- Weak Formulation and Implementation of Bylaws
- Overlap between district and national governments
- Revenue collection and sharing between local and national governments
- Nothing is being ploughed back to develop or conserve the resources.

### **3.13 Lake Victoria Water Office**

Lake Victoria Water Office has the mandate to coordinate appropriate utilization of water resources, monitoring water quality and quantity. The institution is mandated to enforce water act, issue water rights, discharge effluent assessment and permit, collection analysis and storage of data, collection of water users fees, and water resource use conflict resolution. It is also endowed with the role of promoting the formation of Water Users' Associations and water user groups at community level.

To meet their mandate, the Lake Victoria Water Office has been involved in monitoring of water quality and quantity along the Mara River Basin in collaboration with WWF. The institution has a laboratory equipped with facilities for water testing. Surface water monitoring is undertaken on a quarterly basis. In addition, LVWO also ensures water quality is not compromised especially along the mines, by undertaking frequent water tests, and cross checking water test results from Barick Gold Mines Laboratory which is located in Tarime District Location, and Placer Dome.

### **Challenges in meeting mandates**

- Lack of laboratory supplies
- Lack of sufficient number of water engineering staff

**Linkages:** Lake Victoria Water Office has linkages with government institutions, District Councils, Barick Mines, and Placer Dome who are involved in water quality monitoring, TANAPA, and Mara River Basin Project. WWF?

### **3.14 Tanzania National Parks (TANAPA)**

Tanzania National Parks is the principal authority charged with the management of National Parks in Tanzania. Their jurisdiction revolves around management of Serengeti National Park and protection of animals within and does not extend to community wildlife areas. In terms of the Mara River Basin, TANAPA is mandated to safeguard Serengeti Ecosystem from Water flows collapse and ensuring that it survives based on regular supply of water to the ecosystem.

To fulfill its mandate, TANAPA:

- Collects data on water flow especially in the dry season on the Mara River;
- Has developed a General Management Plan for Serengeti National Park, which outlines in detail, ecosystem management programme in terms of zoning, utilization of resources, and protection of the Mara River.
- Has established a visitor education center in Seronera, where visitors can get information on wildlife migration, and conservation of the ecosystem.
- Manages the park ecosystem and employs Fire as a Management Tool to cope with drought. This helps the green grass to sprout during the short rains, thus containing animals within the park.
- Ensures hotel facilities adhere to environmental requirements including EIA, non- abstraction of surface water, and must be located 2 kms from water bodies.

### **Challenges in meeting mandate:**

- Lack of harmonization of policies regarding management of trans-boundary ecosystems such as the Mara and Serengeti.
- Low capacity in integrated water management
- Low capacity in integrated natural resources management
- Monitoring of water flows and pollution
- Low capacity of honorary wardens



- Management of livestock

**Linkages:** TANAPA has linkages with various institutions that are involved in the Natural Resources Management. These include: Frankfurt Zoological Society, KWS, WWF, Narok County Council, and Mara Conservancy.

### **3.15 National Environment Management Council**

The National Environment Management Council (NEMC) came into being in 1983 when the Government of Tanzania enacted the National Environment Management Act No. 19 of 1983. The Council was re-established in 2004 when the Environmental Management Act No. 20 of 2004 was passed.

NEMC has the broad mandate to oversee environmental management issues. It also has the role to ensure sustainable management of the environment, prevention and control pollution, waste management, environmental quality standards, public participation, environmental compliance and enforcement. Furthermore, it gives NEMC mandates to undertake enforcement, compliance, review and monitoring of environmental impacts assessments, research, facilitate public participation in environmental decision-making, raise environmental awareness and collect and disseminate environmental information.

To fulfill its mandate, NEMC is involved in:

- Environmental monitoring and enforcement of compliance
- Research
- Environmental awareness creation
- Dissemination of environmental information and research findings
- Review of EIAs
- Implementation of environmentally related projects

#### **Challenges in Meeting mandate**

- Lack of adequate legislative support
- Limited resources
- Poor Enforcement of Environmental Laws

**Linkages:** NEMC works hand in hand with government institutions, private sector and partners. It also puts emphasis on individual responsibility as critical in protection of the environment. Key government institutions working with NEMC in conservation of the environment include:

- Vice President Office - Division of Environment (DoE)
- Ministry of Water and Livestock Development

- Ministry of Industry and Trade
- Ministry of Land and Human Settlements
- Ministry of Agriculture
- Ministry of Works and Communication
- Ministry of Natural Resources and Tourism (Forestry, Fisheries, Wildlife and Tourism sectors)
- Ministry of Education and Culture
- Institute of Resource Assessment- University of Dar-Es-Salaam.
- Ministry of Regional Administration and Local Government – President Office
- Commission for Science and Technology (COSTECH)
- Ministry of Energy and Minerals

### **3.16 Tanzania Wildlife Research Institute (TAWIRI)**

TAWIRI is an institute mandated with the responsibility to carry out and co-ordinate wildlife research in Tanzania with and provide information and advice to the government, and wildlife management authorities on sustainable conservation of wildlife in line with vision 2025, on sustainable conservation of natural resources. The institution seeks to provide information to better manage wildlife, biodiversity and raise public awareness.

TAWIRI seeks to fulfill its mandate by implementing the new Wildlife Agenda which is aimed at promoting sustainable conservation including utilization of wildlife and biodiversity, and Promoting training and education on wildlife through sponsoring of training and providing quality advice and information on wildlife resources to the principal stakeholders and the general public.

TAWIRI is involved in activities focusing on Human-Wildlife Interactions, Ecological Interactions, Biodiversity Inventory, Data Base, and Ecosystem History in Serengeti. Activities on Human –Wildlife interaction looks at land use dynamics, socio-economic aspects that contribute to poverty alleviation by promoting improved and sustainable human livelihood, consumptive and non-consumptive utilization of wildlife resources in border areas, improved agriculture and animal husbandry. Other human-related issues include tourist impact and impact of policies and International Conventions

In ecological interactions the institute is assessing wildlife diseases, ecological corridors, population trends, wetland ecology, and vegetation and fire ecology. Others include animals’ behavior, herbivore-plant interactions as well as competition, mutualism and facilitation.

TAWIRI is also involved in preparation of Biodiversity Inventory and Database incorporating past records, specimens, reports and publication from researches. Other activities include documentation of Ecosystem history in terms of Climate

change and Meteorological history, and evolutionary history of the ecosystem that will help to predict any naturally occurring phenomenon such as severe drought.

#### **Challenges in implementing Mandate**

- Poor linkages with TANAPA
- Poor linkage with scientists carrying out research in Serengeti

### **STAKEHOLDERS**

#### **3.17 World Wide Fund for Nature (WWF)**

World Wide Fund for Nature (WWF) is a global conservation organization. Its goal is to ensure conservation of bio-diversity in harmony with the needs and aspirations of local communities.

To fulfill its mandate in the MRB, WWF is currently undertaking the Mara River Basin Initiative. The aim of this project is to facilitate catchment management in order to ensure adequate water supply of sufficient quality for both human and ecosystem needs. The Initiative is facilitating adoption of the Integrated River Basin Management (IRBM) approach as a means of ensuring the Mara's waters are sustainably and equitably used and conserved.

#### **Challenges in fulfilling mandate**

- Political sensitivities of the Mau
- Drought – climate change
- Risk of sustainability of the different initiatives
- Low capacity of CFAs and WRUAs despite their huge mandate
- Low adoption by stakeholders especially because some of the projects/activities do not have clearly visible economic benefits

**Linkages:** Bringing together the stakeholders to jointly decide on how best to apportion, use, manage and conserve water and other natural resources in the river basin is the approach being used. Key partners with WWF include KFS and CFAs in forest rehabilitation; WRMA and WRUAs in water resources issues; Ministry of Agriculture on riverine planting; Ministry of Education (MoE) in identification of school for tree planting initiative; National Environment Management Authority (NEMA) for all environmental issue; African Wildlife Foundation (AWF) on management plans; Care and World Vision on water and sanitation; and Florida International University on assessment of river flows.

WWF have a Technical Environmental Committee (TEC) which meets Quarterly. The TEC has a joint work plan for all the partners so that implementation of similar

activities can be done together. Currently WWF does the coordination and hosting of the TEC, while WRMA is the chair.

With the private sector, the WWF has been engaging hoteliers to invest in constructed wetlands to treat wastewater from their facilities. Additionally, they have also started evaluating a Payment for Environmental Services (PES) scheme which is still in the initial stages.

### **3.18 Interim Coordination Secretariat (ICS) on the Mau Forest – Office of the Prime Minister**

The ICS was formed based on the recommendations of the multi-sectoral Task Force set up on the conservation of the Mau Forest. The ICS was formed based on the recommendations of the Institutional Framework for Sustainable Conservation and Management of the Mau Forest Complex.

The mandate of the ICS, within the Office of the Prime Minister, is to coordinate the implementation of the Government recommendations on the rehabilitation and conservation of the Mau Forests Complex as proposed by the Task Force.

The ICS has a time line of two years. In the longer term, a Mau Forests Complex Authority will be established to coordinate and oversee the management of the Mau Forests Complex. The Authority will be guided by a Board of Directors comprising representatives of main stakeholders, including the economic sectors that are most dependent on the goods and services provided by the Mau Forests Complex such as water, energy, tourism and wildlife, agriculture and forestry.

To fulfill its mandate, the ICS has

- Mobilized various partners who have “adopted” some of the forest blocks with a view of rehabilitating them; and
- Undertaken the survey of five forest blocks

#### **Challenges in fulfilling mandates**

- Mobilizing partners and resources
- Implementing all the recommendations of the Task force within a short time frame
- Institutionalizing the secretariat in the two years before its conversion to an Authority

**Linkages:** Already the ICS has gotten partners to take up various forest blocks by form of adoption. Some of these partners include the French Government, African Wildlife Foundation (AWF); UNEP; USAID; European Union; and Mau Trust.

### **3.19 Ewaso Ngiro South Development Authority (ENSDA)**

ENSDA was established by an Act of Parliament Cap 447 of the Laws of Kenya (1989), and started its operations in 1991. The Authority covers the entire Narok North, Narok South, Kajiado ,Oloitokitok ,Naivasha, Transmara, Nakuru, Molo, and Nyandarua South districts. The authority was formed on river basins and large water masses and is intended to provide balanced integrated multi-sectoral programs across administrative boundaries to enhance equitable development in the country.

The mandate of ENSDA is to initiate, plan, implement and co-ordinate development projects and programs within the region. It thus aims to facilitate socio-economic development in the region under its jurisdiction.

Key activities undertaken by ENSDA in the MRB include:-

- Preparation of resource maps and formulation of integrated regional development plans
- Natural resources and environmental management and conservation
- Promotion of community participation in development for equitable benefit sharing from the economic exploitation of resources within the region
- Implementation of livelihood projects for empowering communities in the region
- Coordination, monitoring and evaluation of projects in the region
- Institutional capacity building

#### **Challenges in fulfilling mandate include:**

- Having a vast area but limited resources
- High poverty levels in the project area
- Poor infrastructure
- Inadequate technical capacities with regard to
  - Development of Integrated Regional Development Master plans
  - Strengthening technical capacity in Integrated Natural Resources Management
  - Capacity in value addition of natural resources
  - Capacity in development of green energy

**Linkages:** In the MRB, ENSDA has established regional, all-inclusive stakeholder forums. It also works with government departments as a member of district development committees. It further monitors and documents levels of development in the region and disseminates this information to various stakeholders. Key partners include: Narok County Council, United Nations Environment Programme (UNEP), Kenya Forest Working Group (KFWG), and Green Belt Movement (GBM)

### **3.20 Trans-boundary Water Users Forum (TBWUF)**

The Trans-boundary Water Users Forum is a voluntary body, which was initiated in 2008 through the assistance of WWF to bring on board waters users from Kenya and Tanzania. The forum comprises of Mara River Water Users Association (MRWUA), and Mara Catchment Committee from Tanzania. The forum is also made up of technical officers from ministries of water, agriculture, livestock development, forestry and wildlife and local government in both countries. Other stakeholders include Serengeti National Park, Maasai Mara Game Reserve and Barick Mines.

The main objectives of TBWUF are to ensure equitable utilization and management of shared water resources, optimization of benefits accruing from water resources, influencing harmonization and implementation of trans-boundary policies and laws that support sustainable water resources management, promoting trans-boundary awareness campaigns, coordination of stakeholders, lobbying and advocating for best practices in transboundary integrated water resources management to meet demands for human beings, wildlife, livestock and natural ecosystems.

In order to fully realize its objectives, the Forum has laid out the following functions:

- Promoting, coordinating, and facilitating/ supporting and advocating for the implementation of IWRM in Mara River Basin.
- Promoting water users associations interests at Regional level fora; decision making bodies
- Advocate for water policy, laws and regulations implementation and changes (to Allocate and Re-allocate Water Resources for Use),
- Conflict resolution as a catalytic role
- Responsible for proposing at Regional and national level the formulation, enforcement and mechanisms for Trans-boundary management of basin
- Represent Mara river water users in the Regional Mara River Basin Technical Advisory Committee.
- Represent Mara river water users interests and plans to the Regional water consultative meetings, workshops and forum

- Advocating for Trans-boundary Water Planning, Minimum flow requirements to protect the ecology and fish life of watercourses
- Advising the government's abstraction licensing authority by barring any abstractions from watercourses above established limits.

**Activities:** The forum is at its formative stages, has developed a constitution, and has met their counterparts from Kenya and Tanzania to chart the way forward. It has also managed to get recognition from LVBC which will pave way to further developments and opportunity to grow, and has an interim management group. In addition the forum has developed a work plan to guide their efforts within the basin, and in particular to promote implementation of the BSAP.

#### **Challenges in meeting mandate:-**

- Harmonization of laws governing water users associations in Kenya and Tanzania, as well as membership. In Kenya water users association comprises of community members, while in Tanzania it comprises of three government officers and a community member.
- Lack of finance affects the capacity of the Forum to realize its functions, and engage its counter parts in Tanzania in terms of communication and coordination. Registration of the Forum is a challenge in that it cannot be registered in the East African Community, or in one country, but in both.

**Linkages:** The forum works closely with WRMA, LVBC, NEMA, and WWF, TANAPA, and Lake Victoria Water Office among others. In order to enhance linkages with stakeholders the Forum needs to be institutionalized, and requires a Secretariat to coordinate its activities.

### **3.21 Mara Conservancy**

The Mara Conservancy is a non-profit organization contracted on a public-private partnership basis to manage the Mara Triangle, which is the northern part of Maasai Mara, on behalf of Transmara County Council and other stakeholders.

Mara conservancy works with local leaders, communities, and tourism partners, to promote sustainable tourism, management, and conservation. The Mara Conservancy plays an active role in initiating and encouraging conservation efforts within the Maasai Mara National Reserve.

The main activities undertaken by Mara Conservancy include:-

- Anti poaching in the Mara Triangle and surrounding area, in partnership with TANAPA rangers in Serengeti National Park.
- Eradicating human wildlife conflicts
- Tourism revenue collection system on behalf of stakeholders
- Promotion of community scouting
- Improvement of infrastructure by grading a network of all-weather roads within the Triangle, as well as access roads to camps and lodges outside of the Triangle.
- Maintenance of a network of secondary roads and tracks to improve wildlife viewing.
- Restoration of existing ranger stations and the installation of renewable energy and water harvesting systems.
- Strengthened relationships between the Reserve and the surrounding areas by encouraging community projects, and reward schemes for co-existing with wildlife.
- Encouragement of sound eco-tourism principles among camps and lodges.
- Promoting awareness on the impact of off-road driving and land degradation
- Development of Maasai Mara Management Plan

### **Challenges to meet mandate**

- Lack of equipment (Communication and security apparatus) and resources-vehicles for to support security operations
- Political interference
- Promoting concept of responsible tourism to visitors and lodges
- Training of community scouts

**Linkages:** Mara conservancy has strong professional linkages with KWS, TANAPA and other Conservancies in the Mara: Mara North Conservancy, Ol Choro Oiroua Conservancy and Maji Moto, including all of the tourism stakeholders in these areas and in and around the Mara Triangle.

### **3.22 Kenya Forest Working Group**

The Kenya Forests Working Group (KFWG) was formed with the sole objective of spearheading forest conservation and promoting sustainable forest management in the country. The KFWG membership comprises stakeholders from among individuals, government agencies, non-governmental organizations and the private sector within the membership is represented a wide range of interests at the local, national and



international levels. The group operates as a sub committee of the East African Wild Life Society (EAWLS).

To fulfil its mandate KFWG facilitates exchange and sharing information and experiences among members. It has also been active in identifying strategies for coordinated intervention related to the forest sector. KFWG also undertakes advocacy, research, networking, and partnerships development for improved livelihoods for all Kenyans.

Its activities are mainly supporting community based action and Participatory Forest Management (PFM), promoting tree planting, providing support to local authorities and inadequately managed forests, ongoing forest sector reforms, monitoring the implementation of Forest Act 2005 and advocacy for securing poorly protected forests.

#### **Challenges in meeting mandate**

- Limited workforce due to scarce financial resources
- Limited resource hinder the realization of mandate,
- Different mandate for different organizations makes it difficult to realize one goal,
- Overlap of coverage areas in projects

**Linkages:** KFWG works in collaboration with other stakeholders, such as the Green Belt Movement, Ewaso Ngiro South Development Authority (ENSDA), Narok County Council, and WWF.

### **3.23 Community Based Integrated Forest Resources Conservation and Management (COMIFORM)**

The project is funded by the Government of Spain through the United Nations Environment Programme (UNEP), and works with communities surrounding the Maasai Mau Forest and Narok County Council.

The objective of the project is to introduce a shift from unsustainable land practices to sustainable management supported by forest conservation, payment for ecosystem services and income generation through organized alternative livelihoods on both public and private land. The project also involved the preparation of a Management Plan for the Maasai Mau, and which was approved by both the Narok County Council and Narok Town Council.

The project activities included the rehabilitation of 500 ha, of which 300 ha have already been done by GBM. The project was implemented together with the Kenya Forest Working Group (KWFG), Narok County Council (NCC); and ENSDA.

The project Phase 1 was to run between July 2007- December 2009, and the next phase on the implementation of the management plan is set to begin very soon. The plan, whose overall goal is to “ensure a well managed Maasai Mau Forest providing socio-ecological and environmental services to local and international community”, will be implemented over a ten year period (2010-2020).

### **3.24 Green Belt Movement (GBM)**

The Green Belt Movement (GBM) is a non-profit grassroots organization working with communities to conserve the environment.

The mission of GBM is to mobilize community consciousness for self-determination, equity, improved livelihoods and security, and environmental conservation. It does this by giving them knowledge through civic environmental education to influence them.

To fulfill its mission, GBM uses a ten step program which engages communities in forming tree nurseries and planting seedlings on public lands, degraded forest areas, and private farms. The 10-step tree-planting procedure also includes Civic & Environmental Education (CEE) seminars for all community members, especially those in the tree nursery groups.

In the MRB, GMB activities are concentrated in the Maasai Mau Forest block. Activities include the implementation of the COMIFORM project since year 2007. This involves the rehabilitation of 500 ha , of which 300 ha have already been done by GBM. The project is implemented together with the Kenya Forest Working Group (KWFG), Narok County Council (NCC); and ENSDA. The GBM is also implementing the Bill Clinton Climate Initiative which also involves forest rehabilitation as a bio-carbon project. This has so far rehabilitated about 37 ha and raised about 6 million seedlings.

### **Challenges in meeting mandate/mission**

- Mobility of extension staff and transporting seedlings during planting
- Participatory Forest Management Training especially for green rangers
- Making conservation an economic enterprise

**Linkages.** GBM also has a Memorandum of Understanding (MOU) with the Kenya Army under the Environmental Soldier Program. Under the COMIFORM project, the GBM also has linkages with ENSDA, NCC, KFS, and KFWG as they implement the project jointly. The GBM also has linkages with the Trans Mara County Council and WWF.

GBM also assists and supports the formation of CFAs. It is also a member of the Mau Forest Trust where it partners with private sector in tree planting. The Mau Forest Trust has adopted the Eburru Forest and consists of KFS, KWS, Nation Media Group (NMG); East Africa Breweries Limited (EABL); and Equity Bank. GBM gives the technical input while the corporate raise funds and participate in tree planting.

### **3.25 Community Forest Associations (CFA)**

CFAs were established under the Forest Act 2005 to be co-managers of forests with the Kenya Forests Service. They were established to ensure that benefits of conservation work accrued to communities. The CFAs are mainly comprised of user groups such as grazing, fodder collection, beekeeping, and conservation work.

The mandate of CFAs is to be co-managers of forests within their areas. This includes making of management plans together with the KFS and helping in their implementation. Overall, tangible economic benefits should accrue to the CFAs while the forests are sustainably managed.

To fulfill their mandates, the CFAs are involved in the supply of tree seedlings and in riverine protection. CFA members are also employed as casuals in planting and weeding in the gazetted or trust land forests.

### **Challenges in Meeting mandates**

- Most of the CFAs are in their nascent stages. Indeed, only a few have been registered while others are still being formed. In the Mau complex a total of 22 CFA should be formed, one for each block. However, only three are fully formed and another three are in the formative stages.
- CFA's are formed as Self help groups not conservation groups
- Have little understanding of the forest Act – some thought they would take up the forests
- Have little bargaining power with KFS
- Poor link between KFS and CFAs especially with regards to benefits sharing and co-management

### **3.26 National Alliance of Community Forests Associations (NACFA)**

The National Alliance was established and registered by the Forest Action Network (FAN) in 2004 before the Forest Act 2005. It brought together forest adjacent communities in Mau, Mt. Kenya, Mt. Elgon, and Marsabit. Once the forest Act was established the members of the alliance joined various CFAs and maintained their linkages.

The mandate of the association is to bring together all CFAs in the country so that they can have a forum to share their experiences and to support one another especially with regard to conservation and benefits sharing experiences.

So far, the association has been supporting the formation of CFAs and also maintaining links among the established CFA.

**Linkages:** The alliance has been working together with the Kenya Forest Service and have been given an office at Menengai Forest. The alliance has also received support from IUCN for their activities in the Mau forest. It has also been supported by the Kenya National Federation of Agricultural Producers (KENFAP) to go round 22 districts in Kenya for recruitment of members to the association.

The main challenges of the Association is funding and lack of a secretariat to coordinate its activities.

### **3.27 Timsales Ltd.**

Timsales is a private company, mainly involved in sawmilling. As a private company Timsales has been getting most of its wood from government forests.

As part of its Corporate Social Responsibility (CRS), Timsales has a mission to assist the government in its reforestation programmes especially in the Mau Conservancy.

To fulfill this mission, Timsales have established their own tree nursery at their head office in Elburgon. The nursery mainly has pine and cypress seedlings for the establishment of industrial plantations. The nursery also raises indigenous plant seedlings for riverine planting and for the water catchment areas. While undertaking their own plantations, Timsales also leaves about 100 metres on each side of a river for planting with indigenous seedlings.

### **Challenges in implementing mission**

- Difficult working relationships with local communities
- Protecting planted seedlings

**Linkages:** On the afforestation programme, the company has linkages with Kenya Forestry Research Institute (KEFRI) who provide tree seeds for the programme. The company also works closely with KFS who provide them with technical support.

Timsales has also employed skilled staff who patrol and nurture the planted trees (both indigenous and exotic). They are also educating local farmers on the need to protect the young seedlings. Overall, the firm ensures it plants more than it harvests in its plantations to ensure sustainability.

### **3.28 Mara River Water Resource Users Association (MRWUA)**

The Mara River Water User's Association (MRWUA) is one of the WRUAs, which was formed in 2002 and registered in 2005. It is made up of individuals, institutions, and community based organizations. Currently the group has over a thousand registered cooperate, individuals and CBO members.

MRWUA has a board membership drawn from Amala and Nyangores tributaries, and the main Mara River, each represented by 8, 6, and 3 members respectively.

The primary objectives of MRWUA are to promote the protection and conservation of the Mara Catchment area, support the sustainable and efficient use of water, assist relevant authorities with water resources management, issuance of water use permits, and water conflict resolution.

To fulfill its mandate, MRWUA is engaged in environmental education, has established tree nurseries in local schools, and gives particular attention to the socio-economic benefits of biodiversity conservation. The group offers demonstrations and trainings in water and soil conservation best practice to communities and institutions. Other activities include, catchment rehabilitation, afforestation, energy saving technologies, river banks protection, conservation education on alternative to river bank farming, through creation of riparian buffer strips using fruit trees, rainwater harvesting, water pans, and spring protection. The organization also undertakes exchange visits with community members on conservation.

### **Challenges in fulfilling mandate**

- Limited resources in terms of finances and equipment in its conservation efforts
- Lack of capacity in integrated natural resources management
- Lack of a resource center where information gathered can be disseminated to community members
- Lack of training in water monitoring in terms of quality and quantity
- Political interference, in catchment conservation especially in Mau forest

**Linkages:** MRWUA works in collaboration with Water Resource Management Authority, World Wide Fund for Nature-Eastern and Southern Africa Regional Programme, National Environment Management Authority, Ministry of Agriculture, CFAs and Bomet County Council.

### **3.29 Mara River Basin Project**

Mara River Basin Trans-boundary Integrated water resources management & development project is one of the three river basin management projects implemented under the NELSAP (Nile Equatorial Lakes Subsidiary Action Program) under the Nile Basin Initiative (NBI). The Project Management Unit (PMU) is based in Musoma, Tanzania. The project seeks to establish a sustainable frame work for the joint management of the water resources in Mara River basin in order to prepare for sustainable development oriented investments that will improve the living conditions of the people while protecting the environment.

Its specific objectives include

- Establishment of a sustainable framework for joint management of the shared water resources of the Mara River

- Development of an investment strategy and conducting of pre-feasibility studies
- Building capacity at all levels for sustainable management and development of Mara River basin
- Implementing small – scale investment projects to build early confidence in Mara River basin community

The main activities of the project include: developing transboundary cooperative framework, development of Mara River Basin Investment Scenarios, Capacity building and Training, and development of Small-Scale investment projects.

In Tanzania, the project has been involved in:-

- Training for small-scale irrigation;
- Kenyamonta Basin Irrigation Farming project in five villages in Musoma District;
- Small-Holder Irrigation Development Project in Bisarwe Village;
- Promotion of dairy animal industry in Tarime District; and
- Kiagata Community Based Water Supply Project in Musoma District

In Kenya the project has been involved in the following activities:-

- Water supply and sanitation project in Bomet District
- Construction of Eight water dams for the provision of water for human and livestock consumption. Kirindon and Lolgorian of Transmara District
- Provision of Water Office Laboratory, Kilgoris Town in Transmara District
- Rehabilitation and Construction of water supplies, Transmara District
- Training of Communities in water supply management, District Water Office Transmara
- Construction of sewage drainage and treatment plant, Bomet Town
- Environmental conservation project (river catchment deforestation and human encroachment), Narok and Transmara Districts
- Rehabilitation/extension of water supply in Lemek, Narok District
- Construction of treatment works and pumping system for water supply in Mulot, Narok District

**Linkages:** The project has linkages with local authorities in Kenya and Tanzania, WWF, Water Users Association, LVEMPII, and Lake Victoria Water Office.

### **3.30 SCC-VI-Agroforestry**

Swedish Corporative Center-Vi (SCC-VI) Agroforestry Programme is an international non political, non religious and non profit organization registered in Sweden and in Kenya, Uganda, Tanzania and Rwanda as a non-governmental organization. It is funded by individual donors and the Swedish government through SIDA. The program started in 1983, in Kenya, and it is mandated to promote tree planting and agroforestry in rural areas.

The programme is being implemented in Masaka, Musoma, Mwanza, Kisumu, Kigali, Kagera. Currently the organization has seven projects in the Lake Victoria Basin. The activities of VI-Agroforestry are guided by the objective to increase firewood, wood, food and nutritional security at household level, and Sustainable market oriented production established with emphasis on agroforestry products.

The main activities of the organization are undertaken through participatory agroforestry extension, field days, demonstrations and group processes, provision of start-up tree seeds, advisory and training on:

- Planting short term trees for quick supply of fuelwood
- Tree growing in crop fields (full cycle; on-farm nurseries/direct sowing, transplanting and tree management). Include intercropping of hedgerows and long-term trees.
- On-farm soil and water management practices
- Integrated soil fertility management practices (Nitrogen fixing species, use of organic manure, crop rotation, trash lines etc)
- Use of trees for purposes like pest control (natural pesticides)
- Promoting the growing and use of fruit trees and vegetables
- Awareness raising and sensitization on the use of improved seeds and timing of activities as part of basic requirements for improving agricultural production.
- Promoting farm based entrepreneurship (Training and sensitization)
- Capacity building on participatory planning at community level

#### **Challenges**

- Low uptake of skills by communities
- Influencing attitude change for improved farming systems approach, to incorporate tree growing together with agricultural crops and to sensitize farmers to organize themselves into member based groups for purposes of having capacity to better market their produces
- Capacity building of the target communities to be able to sustain project activities on their own.



**Linkages:** The organization has two forms of partnership, the collaborative partners and implementing partners. The Moshi University College of Cooperatives and Business Studies (MUCCoBS) has been the main implementing partner, responsible for capacity building of SCC-Vi AFP Tanzania staff and advice on Farm Enterprise Development.

SCC-Vi AFPs in Tanzania work with many collaborative partners including research institutions such as the World Agro-forestry Centre (former ICRAF) and Lake Zone Agricultural Research and Development Institutes (Ukiriguru and Maruku). The organization works with research institutions to enable farmers to access and use research findings suitable to their needs.

Other linkages revolve around exchange of information, sharing of trainings and field experiences with local government departments and other development actors.

#### **4. FINDINGS OF THE SWOT ANALYSIS FOR INSTITUTIONS**

To effectively determine capacity needs of the key institutions dealing with natural Resources Management, a Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis was undertaken.

The objective of the SWOT was mainly to analyse the capacities of the institutions in MRB, and to identify the weaknesses in capacities which were then translated as the capacity gaps to be filled. Strengths should be capacity strengths and can create opportunities of knowledge and skill transfer to other institutions.

Information from focal persons was sought and triangulated. In undertaking the SWOT, the possible roles that the key institutions would play in the implementation of the recommendations of both the Biodiversity Strategy and Action Plan (BSAP) and the Reserve Flows for the Mara River were considered. especially with regards to opportunities.

The SWOT for each of the institutions is as presented in matrix form in Table 4.1 below:

**Table 4.1: SWOT ANALYSIS MATIX**

<b>Institutions</b>	<b>Strengths</b>	<b>Weaknesses</b>	<b>Opportunities</b>	<b>Threats</b>
<b>Kenya</b>				
1. National Environmental Management Authority - NEMA	<ul style="list-style-type: none"> <li>⇒ Strong legislative powers</li> <li>⇒ Strong mandate to coordinate all matters related to the environment</li> <li>⇒ Qualified personnel with diverse experience</li> <li>⇒ Existing collaboration and partnership in environmental management</li> <li>⇒ Mandated Structure extending to grassroots level through provincial and district offices and committees</li> <li>⇒ Ability to generate some revenue through licensing, penalties, grants, gifts</li> <li>⇒ Environmental police unit</li> <li>⇒ Trained prosecutors</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Inadequate facilities and equipment at district level including computers, vehicles</li> <li>⇒ Inadequate inter-sectoral mechanisms for environmental coordination</li> <li>⇒ Inadequate staff numbers – areas too wide for one person</li> <li>⇒</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Political goodwill for environmental management especially Mau</li> <li>⇒ Donor community willing to provide support and resources.</li> <li>⇒ Existence of invaluable indigenous knowledge</li> <li>⇒ The willingness of government departments, NGOs and the private sector to support NEMA</li> <li>⇒ Potential for networking and alliance formation</li> <li>⇒ An increasingly sensitized and supportive public on environmental matters</li> <li>⇒ Lead agencies provide additional capacity to NEMA</li> <li>⇒ Existence of regional environmental programmes</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Unclear delineation of roles for some lead agencies in environmental matters.</li> <li>⇒ Resource use conflicts</li> <li>⇒ Inadequate appreciation of the role of NEMA by the public and lead agencies</li> <li>⇒ Inadequate national accounting for natural resources</li> <li>⇒ Dependence on donor funding</li> </ul>
2. Kenya Forest Service (KFS)	<ul style="list-style-type: none"> <li>⇒ Semi-autonomous government institution</li> <li>⇒ Forest Catchment Committees in Place</li> <li>⇒ CFAs being formed</li> <li>⇒ Paramilitary training of officers</li> <li>⇒ Have adequately trained technical staff</li> <li>⇒ Have good relationship with communities</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Reform from FD to KFS too slow - all staff not employed by KFS and thus low staff morale</li> <li>⇒ Poor communication equipment and infrastructure</li> <li>⇒ No management plans in place</li> <li>⇒ Lack of enough capacity to manage and protect all forests</li> <li>⇒ Not incorporated communities in co-management of forests</li> <li>⇒</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Use of local communities in management of forests – participatory forest management</li> <li>⇒ Eco-tourism</li> <li>⇒ Carbon trading</li> <li>⇒ Non-wood products production</li> <li>⇒ IGAs</li> <li>⇒ Donor funding to environmental issues</li> <li>⇒ Use of Management Plans</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Ownership of forests</li> <li>⇒ Global warming</li> <li>⇒ Loss of biodiversity through fires and overgrazing</li> <li>⇒ Lack of community participation in forest management</li> </ul>
3. Narok County Council (NCC)	<ul style="list-style-type: none"> <li>⇒ Ownership of resources – MMNR and MM</li> <li>⇒ High profile of MMNR as tourism facility</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Inadequate staff capacity</li> <li>⇒ Inadequate resources – funds, equipment, and infrastructure</li> <li>⇒ Lack of community participation</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Participatory forests management</li> <li>⇒ Development of Maasai Mau as a tourism area</li> <li>⇒ Linking of MM and MMNR</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Boundaries of protected areas (MM and MMNR) with communities</li> <li>⇒ Mushrooming tourist facilities</li> </ul>

Institutions	Strengths	Weaknesses	Opportunities	Threats
	<ul style="list-style-type: none"> <li>⇒ Development of management plans (MMNR) and strategic plan (MM)</li> <li>⇒ High revenues and willing donor support</li> <li>⇒ Have adequate laws and by-laws</li> <li>⇒ Government pays for conservation</li> <li>⇒ Have local staff</li> </ul>	<ul style="list-style-type: none"> <li>in management</li> <li>⇒ Lack of adequate human resources in integrated NRM</li> <li>⇒ Lack of implementation strategy despite having management plans</li> <li>⇒ Revenue collection and distribution poor</li> <li>⇒ Skewed sharing of benefits – communities do not benefit adequately</li> <li>⇒ Lack of skills to engage communities in NRM</li> </ul>	<ul style="list-style-type: none"> <li>⇒ New Mau Summit Road which will open up link with Nakuru</li> <li>⇒ Participating in the integrated NRM of the whole basin</li> <li>⇒ Involvement in Payment for Environmental Management Schemes (PES)</li> </ul>	
4. Transmara County Council (TCC)	<ul style="list-style-type: none"> <li>⇒ Ownership of resources – Mara triangle in MMNR</li> <li>⇒ <input type="checkbox"/> Indigenous knowledge systems that help community cope with and adapt to the environment</li> <li>⇒ <input type="checkbox"/> Multi-ethnic environment</li> <li>⇒ The world-famous Mara Game Reserve</li> <li>⇒ Accountable revenues collection</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Lack of human capacity to manage natural resources</li> <li>⇒ Poor or non-extant physical infrastructure and equipment</li> <li>⇒ Lack of Commercial orientation and culture to transform resources into income generating</li> <li>⇒ Skewed sharing of benefits – communities do not benefit adequately</li> <li>⇒ Lack of skills to engage communities in NRM</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Growing interest in eco-tourism and community wildlife management</li> <li>⇒ <input type="checkbox"/> Access to cross-border opportunities e.g. Serengeti Mara Ecosystem Management and the Nile Basin Initiative</li> <li>⇒ Participating in the integrated NRM of the whole basin</li> <li>⇒ Involvement in Payment for Environmental Management Schemes (PES)</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Resource-use conflicts</li> <li>⇒ Rampant forest destruction</li> <li>⇒ Endemic poverty and rising population</li> <li>⇒ Low interest in private sector investment</li> <li>⇒ Growing vulnerability to climatic shocks</li> <li>⇒ Collapse of traditional pasture management practices</li> <li>⇒ Land tenure system and uneconomic sub-division of land</li> <li>⇒ Fragile eco-system that is being pushed to the limit through tourism expansion</li> </ul>
5. Kenya Wildlife Service (KWS)	<ul style="list-style-type: none"> <li>⇒ Trained and competent staff</li> <li>⇒ Use of management plans – regional strategic plans being developed for local parks/areas</li> <li>⇒ Well established wildlife protection units</li> <li>⇒ Good community programmes</li> <li>⇒ Good research competencies</li> <li>⇒ Capable veterinary unit</li> <li>⇒ Good infrastructure – vehicles and equipment</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Not enough research in Maasai Mau and MMNR</li> <li>⇒ Unexploited revenue base / potential revenue streams,</li> <li>⇒ Lack of incentive scheme</li> <li>⇒ Incomplete synergy among departments</li> <li>⇒ Incomplete biodiversity research in the Maasai Mau</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Unexploited potential in Maasai Mau</li> <li>⇒ Research in the Maasai Mau</li> <li>⇒ Use of bio-technology</li> <li>⇒ In-situ conservation</li> <li>⇒ Linkages with other institutions</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Politics in Mau</li> <li>⇒ NGOs who only highlight conflicts</li> <li>⇒ General insecurity and poaching</li> <li>⇒ Human-wildlife conflicts</li> <li>⇒ Unplanned tourism facilities</li> <li>⇒ Pollution of Mara river</li> <li>⇒ High community support expectations</li> <li>⇒ Bio-piracy and bio-prospecting</li> </ul>

<b>Institutions</b>	<b>Strengths</b>	<b>Weaknesses</b>	<b>Opportunities</b>	<b>Threats</b>
6. Water Resource Management Authority (WRMA)	<ul style="list-style-type: none"> <li>⇒ Mandated to manage and conserve water resources</li> <li>⇒ Existence of competent Staff with knowledge and skills in WRM</li> <li>⇒ Use of catchment strategy</li> <li>⇒ Availability of Catchment Management Strategy, for Lake Victoria South</li> <li>⇒ Strong linkages with WRUAs</li> <li>⇒ Availability of Database and information</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Weak revenue base (based on use and permit charges)</li> <li>⇒ Low capacity of communities to monitor water flows and take measurements</li> <li>⇒ Low capacity to mitigate water-use conflicts</li> <li>⇒ Low capacity to monitor water pollution</li> <li>⇒ Low capacity to implement plans</li> <li>⇒ Few activities in water management in protected areas</li> </ul>	<ul style="list-style-type: none"> <li>⇒ High Stakeholders confidence in WRMA</li> <li>⇒ Engage communities to monitor water flows</li> <li>⇒ WRM monitoring and rehabilitation being a Vision 2030 flagship project</li> <li>⇒ Donor interest</li> <li>⇒ Use of Payment for Environmental Services</li> <li>⇒</li> <li>⇒ Use of health issues to mitigate water pollution</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Conflicting Acts in NRM</li> <li>⇒ Climate Change (floods and drought affect catchment rehabilitation efforts, revenue collection)</li> <li>⇒ Political interference</li> <li>⇒ High poverty levels among communities in the basin</li> <li>⇒ Global warming</li> <li>⇒ Water use conflicts</li> </ul>
<b>Tanzania</b>				
7. Ministry of Water and Irrigation, Lake Victoria Water Office	<ul style="list-style-type: none"> <li>⇒ Good human resource and technical capabilities in</li> <li>⇒ Have functioning water laboratory and hydro-geology section</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Few skilled personnel on water engineering</li> <li>⇒ Lack of lab supplies chemicals</li> <li>⇒ Lack of resources - such as transport</li> <li>⇒ Lack of meteorological equipments (rain gauges, and other weather monitoring equipments)</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Irrigation schemes</li> <li>⇒ Aquaculture</li> <li>⇒ Use of communities to monitor water flows</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Pollution and siltation</li> </ul>
8. District Councils of Tarime, Rorya, Musomo and Serengeti	<ul style="list-style-type: none"> <li>⇒ Forest Act and Forest Policy-insist on Management of Natural Resources</li> <li>⇒ All districts are currently implementing Participatory Forest management programmes</li> <li>⇒ Districts undertaking diverse environmental management activities – forestry, wildlife, water and sanitation</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Lack of extension staff for forestry and environmental management</li> <li>⇒ Lack of prominent transport-vehicle and motorbikes</li> <li>⇒ Lack of skills among the available few staff</li> <li>⇒ Low awareness among local community, and the general public on environmental conservation issues</li> </ul>	<ul style="list-style-type: none"> <li>⇒ High willingness' among the international donor community to support ecological conservation and enhanced management of natural resources</li> <li>⇒ Several available operating projects within management of natural resources</li> <li>⇒ Eco- tourism</li> <li>⇒ High irrigation potential has not been tapped</li> <li>⇒ High aquaculture potential exists</li> </ul>	<ul style="list-style-type: none"> <li>⇒ High extent of deforestation</li> <li>⇒ High extent of environmental pollution of water bodies and terrestrial pollution</li> <li>⇒ High extent of siltation</li> <li>⇒ Illegal hunting of wildlife</li> <li>⇒ Loss of biodiversity (i.e., species biodiversity, populations diversity, and ecological diversity</li> <li>⇒ Invasive plant species such as water hyacinth and the related limited fish breeding sites and limited river stream transport</li> </ul>
9. Tanzania National	<ul style="list-style-type: none"> <li>⇒ Existence of well-established and</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Insufficient financial (and human)</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Development of special</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Destruction of the Mau forest</li> </ul>

<b>Institutions</b>	<b>Strengths</b>	<b>Weaknesses</b>	<b>Opportunities</b>	<b>Threats</b>
Parks – TANAPA and Serengeti National Park (SNP)	<p>developed tourism management in the national parks</p> <ul style="list-style-type: none"> <li>⇒ Has well defined functions that are recognized by everyone;</li> <li>⇒ Existence of a permanent external funding source such as foundations; numerous representations in the field</li> <li>⇒ competent and motivated staff; participatory management included in the functions and are implemented effectively;</li> <li>⇒ Has possibility of acquiring land to create new protected areas.</li> <li>⇒ Has a differentiated pricing strategy for parks entry fees, favouring high value tourism, with optimum natural resource management practices.</li> </ul>	<p>resources to carry out the mandate; only or main source of income</p> <ul style="list-style-type: none"> <li>⇒ Mandate that is either too restricted or too broad to ensure coherent management;</li> <li>⇒ Excessive dependence on donors; political instability/ interference</li> <li>⇒ Difficult relationship with the local communities due to human wildlife conflicts/benefit sharing</li> </ul>	<p>participative management programmes to improve the relationship with local populations and/or create a service dedicated specifically to these programmes</p> <ul style="list-style-type: none"> <li>⇒ Increase partnerships with the private sector in order to increase income from the exploitation of the national parks</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Over abstraction of waters in the Mara River</li> <li>⇒ Lack of a unified management system between Mara and Serengeti Ecosystem</li> <li>⇒ Lack of harmonized legal systems regarding Natural Resources such as water, and forestry</li> </ul>

## 5. CAPACITY NEEDS ASSESSMENT FOR INSTITUTIONS

### 5.1 Institutional Capacity Needs

Institution	Mandate/Responsibility in MRB specifically	Weakness in Capacities (gap)	Specific Capacity Needs	Key non-capacity related constraints (assumption/risk)
<b>Kenya</b>				
1. National Environmental Management Authority -NEMA	<ul style="list-style-type: none"> <li>⇒ General supervision and co-ordination over all matters relating to the environment</li> <li>⇒ Implementation of all policies relating to the environment</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Limited monitoring and coordinating environmental activities</li> <li>⇒ Preparation of annual state of the environment in Kenya;</li> <li>⇒ Limited public education and awareness creation</li> <li>⇒ Compliance and Enforcement of environmental legislation</li> <li>⇒ Review of EIAs and EAs</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Skills among NEMA personnel in Integrated Natural Resources Management</li> <li>⇒ Skills within DEC on environmental management</li> <li>⇒ Enhanced inter-sectoral capacity for coordination</li> <li>⇒ Enhanced capacity for environmental education and awareness creation especially on water pollution</li> <li>⇒ Enhanced capacity for monitoring of environmental activities in the MRB</li> <li>⇒ Building capacity of DEC to assist in monitoring and reporting environmental issues</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Transport and equipment – computers and GPS for improved monitoring</li> <li>⇒</li> </ul>
2. Kenya Forest Service (KFS)	<ul style="list-style-type: none"> <li>⇒ Conserve, develop, and sustainably manage forestry resources on state, local authority, and private land</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Limited capacity in creating environmental awareness;</li> <li>⇒ Limited capacity in training community groups</li> <li>⇒ Nurseries establishment;</li> <li>⇒ Limited capacity in protecting forests;</li> <li>⇒ Limited capacity in mobilizing communities for afforestation and riverine planting</li> <li>⇒ Forest patrols;</li> <li>⇒ Limited capacity in formation of CFAs</li> <li>⇒ Limited capacity in formulation of management plans and business plans</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Formation and training of CFAs for joint management of forest</li> <li>⇒ Formulation of management plans and business plans</li> <li>⇒ Development of benefits sharing and co-management schemes with CFAs</li> <li>⇒ Improving skills of KFS staff in PFM</li> <li>⇒ Building capacity of prosecutors to argue for heavier penalties of forest related crime</li> <li>⇒ Capacity to identify, assess impact, and mitigate impact of GMOs and biotechnology</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Support for communities on Income Generating Activities (IGAs) and business skills</li> <li>⇒ Identification, collection and storage of genetic resources</li> <li>⇒</li> </ul>

<b>Institution</b>	<b>Mandate/Responsibility in MRB specifically</b>	<b>Weakness in Capacities (gap)</b>	<b>Specific Capacity Needs</b>	<b>Key non-capacity related constraints (assumption/risk)</b>
3. Narok County Council (NCC)	⇒ Conservation of the natural resources within the Maasai Mau and Maasai Mara National Reserve	⇒ Security patrols – to protect both visitors and wildlife ⇒ Limited capacity to collect and account for revenues and put some back to conservation; ⇒ Limited capacity to deal with human-wildlife conflicts ⇒ Liaison with other stakeholders – KWS, NGOs, lodges and camps ⇒ Fire management ⇒ Limited management capacity - closing off some areas for natural recovery and regeneration ⇒ Licensing of tourist facilities ⇒ Contributing to joint Mau operation force	⇒ Capacity to review EIAs and Audits and ensure compliance ⇒ Skills in integrated management of natural resources ⇒ Skills on participatory forest management for forest guards ⇒ Skills in habitat management and biodiversity conservation ⇒ Skills in wildlife management for forest guards ⇒ Capacity in GIS – only use GPS for rhino surveillance ⇒ Capacity on tourism development in both MMNR and Maasai Mau – identification of sites in both the community areas and reserve for advertisement to private sector develop ⇒ Capacity to assist in development of conservancies in the community areas	⇒ Revenue collection and accountability ⇒ Benefits sharing with communities ⇒
4. Transmara County Council (TCC)	⇒ Managing the Mara Triangle part of the Maasai Mara National Reserve	⇒ No capacity in management of NRM – TCC has contracted Mara Conservancy ⇒ Involved in the process of developing Maasai Mara Management Plan	⇒ Skills in integrated natural resources management ⇒ Capacity to promote sustainable eco-tourism ⇒ Capacity in conflict resolution ⇒ Capacity in GIS – only use GPS for rhino surveillance ⇒ Capacity on tourism development in both MMNR and Maasai Mau – identification of sites in both the community areas and reserve for advertisement to private sector develop ⇒ Capacity to assist in development of conservancies in the community areas ⇒ Capacity to review EIAs and Audits and ensure compliance ⇒ Skills in integrated management of natural resources ⇒ Skills on participatory forest management for forest guards ⇒ Skills in habitat management and biodiversity conservation	⇒ Benefits sharing with communities ⇒
5. Kenya Wildlife	⇒ To conserve and manage	⇒ Dealing with human-wildlife	⇒ Need training on issues of water management as they	⇒ Identification, collection and



<b>Institution</b>	<b>Mandate/Responsibility in MRB specifically</b>	<b>Weakness in Capacities (gap)</b>	<b>Specific Capacity Needs</b>	<b>Key non-capacity related constraints (assumption/risk)</b>
Service (KWS)	wildlife in Kenya	<p>conflicts</p> <ul style="list-style-type: none"> <li>⇒ Patrols in and outside the protected areas</li> <li>⇒ Research in MMNR</li> <li>⇒ Law enforcement especially in the Maasai Mau and Mau Complex in general</li> <li>⇒ Undertaking community awareness creation and education</li> <li>⇒ Undertaking community projects e.g. water, dams , schools</li> <li>⇒ Supporting existing conservancies with technical skills e.g. Koiyaki and Lemek</li> <li>⇒ Review of EIAs for lodges and camps – tourist facilities</li> </ul>	<p>affect wildlife</p> <ul style="list-style-type: none"> <li>⇒ Integrated resources management capacity especially with regard to water and even forestry</li> <li>⇒ Capacity building in water monitoring – KWS should have laboratory</li> <li>⇒ Capacity to identify, assess impact, and mitigate impact of GMOs and biotechnology</li> </ul>	<p>storage of genetic resources</p> <ul style="list-style-type: none"> <li>⇒ Undertaking research in the Maasai Mau</li> <li>⇒</li> </ul>
6. Water Resource Management Authority (WRMA)	⇒ Monitor, conserve, and manage the water resources and catchment areas sustainably	<ul style="list-style-type: none"> <li>⇒ Limited capacity to monitor water quality and quantity</li> <li>⇒ Management of water resources</li> <li>⇒ Revenue Collection</li> <li>⇒ Enforcement</li> <li>⇒ Training and formation of WRUAs</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Training: Integrated Water Resources Management, Community Mobilization/Conflict Management, GIS and Remote Sensing, Data Management</li> <li>⇒ Facilities: Laboratory for water analysis, GIS equipment, establishment of data center</li> <li>⇒ Development of a River Basin Management Plan, and Communication Strategy</li> <li>⇒ Capacity to train WRUAs</li> <li>⇒ Capacity to assist WRUAs accrue benefits from conservation work</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Monitoring: Rehabilitation of River gauging stations, Provision of Motor Bike to facilitate in collection of data, acquisition of modern data capturing tools.</li> <li>⇒ Payment for Environmental Services and Benefits sharing</li> </ul>

<b>Tanzania</b>				
7. District Councils:- • Tarime • Rorya • Musoma • Serengeti	⇒ Coordination of Natural Resources Management and agricultural activities ⇒ Control the number of livestock; ⇒ Management of forests and wildlife; ⇒ Ensuring public health; ⇒ Solid and liquid waste management ⇒ Enforcement of fisheries laws, monitoring and control of fishery activities ⇒ Controlling soil erosion	⇒ Limited capacity in Natural Resource Management ⇒ Limited capacity in Fisheries ⇒ Limited capacity in Wildlife ⇒ Limited capacity in Forestry and Beekeeping ⇒ Limited capacity in Implementing Participatory Forest Management	⇒ Training in integrated natural resources management ⇒ Training in participatory planning and formulation of management plans ⇒ Training in management of fisheries including fish farming; ⇒ Capacity building to promote sustainable eco-tourism and resolve conflicts ⇒ Formulation of bylaws and their enforcement	⇒
8. Ministry of Water and Irrigation-Lake Victoria Basin Water Office (Musoma)	⇒ Overall management of water resources including formulation of policies in the water sector.	⇒ Issuance of water licenses ⇒ Enforcement of Water Act 1972, ⇒ Issue water rights, ⇒ Discharge effluent assessment and permit, ⇒ Collection analysis and storage of data, ⇒ Collection of water users fees, ⇒ Conflict management	⇒ Measurements of water quality and volume ⇒ Coordination with other players in the water sector such as TBWUAs ⇒ Laboratory supplies ⇒ Skills in policy formulation ⇒ Skills in Programme coordination and monitoring ⇒ Skills on integrated water resource management	⇒
9. Tanzania National Parks – TANAPA and Serengeti National Park (SNP)	⇒ Management of Serengeti National Parks in Tanzania. ⇒ Protection of Wildlife in the park. ⇒ Safeguard Serengeti Ecosystem from Water flows	⇒ Water quality and quantity monitoring ⇒ Ecosystem Management ⇒ Natural Resource Management ⇒ Protection of Wildlife ⇒ Collects data on water flow especially in the dry season on the Mara River; ⇒ Development of General Management Plan for Serengeti National Park	⇒ Need training on issues of water management as they affect wildlife ⇒ Integrated resources management capacity especially with regard to water and even forestry ⇒ Innovation in relation to investments in the national parks ⇒ Training of Scouts ⇒ Prosecution of illegal cases of poaching etc	⇒

	collapse and ensuring that it survives based on regular supply of water to the ecosystem	<ul style="list-style-type: none"> <li>⇒ Visitor education</li> <li>⇒ Ensures hotel facilities adhere to environmental requirements including EIA, and non- abstraction of surface water</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Infrastructure Development</li> <li>⇒ Harmonization of policies between Mara and Serengeti</li> <li>⇒ Capacity in monitoring of water flows and pollution</li> <li>⇒ Training of honorary wardens</li> <li>⇒ Management of livestock</li> </ul>	
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## 5.2 Recommendations for Filling Identified Capacity Needs in Institutions

Institutions	Specific Capacity Needs	Recommendations	Anticipated Benefits
<b>Kenya</b>			
1. National Environmental Management Authority -NEMA	<ul style="list-style-type: none"> <li>⇒ Building capacity of DEC to assist in monitoring and reporting environmental issues</li> <li>⇒ Skills among NEMA personnel in Integrated Natural Resources Management</li> <li>⇒ Skills within DEC on environmental management</li> <li>⇒ Enhanced inter-sectoral capacity for coordination</li> <li>⇒ Enhanced capacity for environmental education and awareness creation especially on water pollution</li> <li>⇒ Enhanced capacity for monitoring of environmental activities in the MRB</li> <li>⇒ Transport and equipment – computers and GPS for improved monitoring</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Assist NEMA in capacity building of local DEC's</li> <li>⇒ Train NEMA Personnel on INRM</li> <li>⇒ Support linkages and information sharing capacity by NEMA by provision of requisite equipment (computers, internet facilities)</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Environmental awareness creation at grassroots levels and reporting on environmental issues to NEMA and enforcing of environmental laws;</li> <li>⇒ Increased role of DEC in coordination and management of environmental issues</li> <li>⇒ Better environmental coordinating role played by NEMA</li> <li>⇒ Better coordination capacity, and environmental awareness creation by NEMA</li> </ul>
2. Kenya Forest Service (KFS)	<ul style="list-style-type: none"> <li>⇒ Formation and training of CFAs for joint management of forest</li> <li>⇒ Development of benefits sharing and co-management schemes with CFAs</li> <li>⇒ Support for communities on Income Generating Activities (IGAs)</li> <li>⇒ Formulation of management plans and business plans</li> <li>⇒ Skills of KFS staff in PFM</li> <li>⇒ Building capacity of prosecutors to argue for heavier penalties of forest related crime</li> <li>⇒ Identification, collection and storage of genetic resources</li> <li>⇒ Capacity to identify, assess impact, and mitigate impact of GMOs and biotechnology</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Formalize and train CFAs</li> <li>⇒ Training of CFAs in entrepreneurship</li> <li>⇒ Training KFS and CFAs in preparation of management plans</li> <li>⇒ PFM training</li> <li>⇒ Training of prosecutors</li> <li>⇒ Training in identification, collection and storage of genetic resources</li> <li>⇒ Training of KFS staff in GMOs and biotechnology</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Enhanced fight against illegal felling of trees and extraction of forest products;</li> <li>⇒ Increased management of forests by communities due to accrued benefits;</li> <li>⇒ Formulation and adoption of management plans for all forests;</li> <li>⇒ Participatory management of forests – co-management;</li> <li>⇒ Identification and in-situ conservation;</li> <li>⇒ Reduced bio-piracy and invasive species</li> </ul>
3. Narok County Council (NCC)	<ul style="list-style-type: none"> <li>⇒ Capacity to review EIAs and Audits and ensure compliance</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Train council officials on how to review and audit projects for compliance</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Increased management of forests and wildlife by local communities;</li> </ul>

Institutions	Specific Capacity Needs	Recommendations	Anticipated Benefits
	<ul style="list-style-type: none"> <li>⇒ Skills in integrated management of natural resources</li> <li>⇒ Skills on participatory forest management for forest guards</li> <li>⇒ Skills in habitat management and biodiversity conservation</li> <li>⇒ Skills in wildlife management for forest guards</li> <li>⇒ Capacity in GIS – only use GPS for rhino surveillance</li> <li>⇒ Capacity on tourism development in both MMNR and Maasai Mau – identification of sites in both the community areas and reserve for advertisement to private sector develop</li> <li>⇒ Capacity to assist in development of conservancies in the community areas</li> </ul>	<ul style="list-style-type: none"> <li>with environmental standards</li> <li>⇒ Create mass awareness on issues relating to INRM across the council employees</li> <li>⇒ Train relevant officers on INRM</li> <li>⇒ Train the NCC on participatory NRM (forests, wildlife etc)</li> <li>⇒ Train the NCC on GIS and support acquisition of additional GIS equipments so as to broaden its use in INRM</li> <li>⇒ Support the exploration and identification of additional tourist attraction sites.</li> <li>⇒ Support community partnerships in management of key resources</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Better governance;</li> <li>⇒ Reduced pollution of water bodies by tourism facilities;</li> <li>⇒ Better management f forests and wildlife;</li> <li>⇒ Increased role of council in water management;</li> <li>⇒ Community participation and benefits from tourism;</li> <li>⇒ Planed development of tourism facilities;</li> </ul>
4. Transmara County Council (TCC)	<ul style="list-style-type: none"> <li>⇒ Skills in integrated natural resources management</li> <li>⇒ Capacity to promote sustainable eco-tourism</li> <li>⇒ Capacity in conflict resolution</li> <li>⇒ Capacity in GIS – only use GPS for rhino surveillance</li> <li>⇒ Capacity on tourism development in both MMNR and Maasai Mau – identification of sites in both the community areas and reserve for advertisement to private sector develop</li> <li>⇒ Capacity to assist in development of conservancies in the community areas</li> <li>⇒ Benefits sharing with communities</li> <li>⇒ Capacity to review EIAs and Audits and ensure compliance</li> <li>⇒ Skills in integrated management of natural resources</li> <li>⇒ Skills on participatory forest management for forest guards</li> <li>⇒ Skills in habitat management and</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Train TCC staff on INRM</li> <li>⇒ Support TCC to identify and roll out eco-tourism initiatives</li> <li>⇒ Support efforts aimed at advancing the skills levels for different TCC personnel</li> <li>⇒ Train relevant departments at the TCC on conflict prevention and resolution mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Increased management of forests and wildlife by local communities;</li> <li>⇒ Better governance;</li> <li>⇒ Reduced pollution of water bodies by tourism facilities;</li> <li>⇒ Better management f forests and wildlife;</li> <li>⇒ Increased role of council in water management;</li> <li>⇒ Community participation and benefits from tourism;</li> <li>⇒ Planed development of tourism facilities;</li> <li>⇒</li> </ul>

<b>Institutions</b>	<b>Specific Capacity Needs</b>	<b>Recommendations</b>	<b>Anticipated Benefits</b>
	<b>biodiversity conservation</b>		
5. Kenya Wildlife Service (KWS)	<ul style="list-style-type: none"> <li>⇒ Need training on issues of water management as they affect wildlife</li> <li>⇒ Integrated resources management capacity especially with regard to water and even forestry</li> <li>⇒ Capacity building in water monitoring – KWS should have laboratory</li> <li>⇒ Undertaking research in the Maasai Mau</li> <li>⇒ Identification, collection and storage of genetic resources</li> <li>⇒ Capacity to identify, assess impact, and mitigate impact of GMOs and biotechnology</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Train KWS staff on water and other resources management principles</li> <li>⇒ Establish a laboratory for water monitoring</li> <li>⇒ Training in identification, collection, and storage of genetic resources</li> <li>⇒ Training on Genetically Modified Organisms (GMOs) and biotechnology;</li> <li>⇒ Training of local institutions to implement research findings</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Increased role of KWS in water management issues;</li> <li>⇒ Improved water quality;</li> <li>⇒ Increased research especially in the Maasai Mau;</li> <li>⇒ In-situ conservation</li> <li>⇒ Increased role of local institutions in biodiversity conservation and water management</li> </ul>
6. Water Resource Management Authority (WRMA)	<ul style="list-style-type: none"> <li>⇒ Additional skills in integrated water resources management</li> <li>⇒ Capacity to train WRUAs</li> <li>⇒ Capacity to assist WRUAs accrue benefits from conservation work</li> <li>⇒ Payment for Environmental Services and Benefits sharing</li> <li>⇒ Resource conflicts resolution</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Training in Integrated Water Management</li> <li>⇒ Increased capacity to form and train WRUAs</li> <li>⇒ Training in Payment for Environmental Services and Benefits sharing</li> <li>⇒ Training in Resource Use conflicts</li> <li>⇒ Provision of water monitoring equipment, data management and storage facilities, GIS equipment</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Improved catchment management by WRMA and WRUAs;</li> <li>⇒ Riverine forest management;</li> <li>⇒ Water monitoring (for quality and quantity) by communities;</li> <li>⇒ Improved data collection on water flows and quality</li> </ul>
<b>Tanzania</b>			
7. Ministry of Water and Irrigation, Lake Victoria Basin Water Office (Musoma)	<ul style="list-style-type: none"> <li>⇒ Measurements of water quality and volume</li> <li>⇒ Coordination with other players in the water sector such as TBWUAs</li> <li>⇒ Laboratory supplies</li> <li>⇒ Skills in policy formulation</li> <li>⇒ Skills in Programme coordination and monitoring</li> <li>⇒ Skills on integrated water resource management</li> <li>⇒ Skills in policy formulation</li> <li>⇒ Programme coordination and monitoring</li> <li>⇒ In-adequate knowledge on water resource</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Train and facilitate the ministry on programme coordination and general oversight of programme activities</li> <li>⇒ Undertake general sensitization on issues on water resource management targeting all officers in the regional offices.</li> <li>⇒ Facilitate awareness creation on the role and mandate of the ministry in relation to other stakeholders such as catchment area committees,</li> <li>⇒ Train officers in water testing skills</li> <li>⇒</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Improved catchment management by Water office and Catchment areas committees;</li> <li>⇒ Riverine forest management;</li> <li>⇒ Water monitoring (for quality and quantity) by communities;</li> <li>⇒ Improved data collection on water flows and quality ;</li> <li>⇒ Improved sharing of information.</li> </ul>

Institutions	Specific Capacity Needs	Recommendations	Anticipated Benefits
	management ⇒ Clear understanding of the Ministry's mandate ⇒ Measurements of water quality and volume ⇒ Coordination with other players in the water sector such as TBWUAs Number of personnel		
8. District Councils: <ul style="list-style-type: none"> <li>• Tarime</li> <li>• Rorya</li> <li>• Musoma</li> <li>• Serengeti</li> </ul>	⇒ Skills in integrated natural resources management ⇒ Skills in formulation of management plans ⇒ Training in management of fisheries including fish farming; ⇒ Capacity building to promote sustainable eco-tourism and resolve conflicts ⇒ Formulation of bylaws and their enforcement ⇒ Revenue collection and sharing	⇒ Train district council staff on INRM ⇒ Support district councils in formulating participatory management plans ⇒ Establish stable community partnerships in NRM ⇒ Train relevant departments at the district councils on conflict prevention and resolution mechanisms	⇒ Improved land-use practices; ⇒ Use of participatory plans for NRM ⇒ Improved awareness and environmental conservation participation by communities
9. Tanzania National Parks – TANAPA and Serengeti National Park (SNP)	⇒ Need training on issues of water management as they affect wildlife ⇒ Integrated resources management capacity especially with regard to water and even forestry ⇒ Training of Scouts and honorary wardens ⇒ Prosecution of illegal cases of poaching etc ⇒ Capacity in monitoring of water flows and pollution ⇒ Training on identification, collection and storage of genetic materials ⇒ Training in GMOs and biotechnology	⇒ Train TANAPA staff on water and other resources management principles ⇒ Close collaboration with the private sector and communities ⇒ Training in identification, collection, and storage of genetic resources ⇒ Training on Genetically Modified Organisms (GMOs) and biotechnology; ⇒ Disseminate of research findings to local institutions; ⇒ Training of local institutions to implement research findings	⇒ Increased role of TANAPA in water management issues; ⇒ Increased role of local institutions in biodiversity conservation and water management Improved water quality; ⇒ Improved in-situ conservation

## 6. COMPREHENSIVE ACTION PLAN

Capacity Programme	Building	Duration/Nature of Programme	Institutions	Target per Institutions	Unit costs (US\$)	Total Costs (US\$)
1. Integrated Natural Resources Management		Medium term 1 – 2 years	⇒ District Council of Musoma (DCM) ⇒ District Council of Tarime (DCT) ⇒ District Council of Serengeti (DCS) ⇒ District Council of Rorya (DCR) ⇒ National Environment Management Authority (NEMA)	One technical staff – total 5	15,000	75,000
2. Training of Trainers (ToT) on Group dynamics, governance, conflict resolution, negotiations		Short term – 3 months	⇒ NEMA ⇒ WRMA ⇒ DCM ⇒ DCT ⇒ DCS ⇒ DCR ⇒ KFS	Two staff – total 14	3,000	42,000
3. Tourism Development and Planning		Medium term – 1-2 years	⇒ Narok County Council (NCC) ⇒ Trans Mara County Council (TCC)	One technical staff – total 2	15,000	30,000
4. Water Resources Management		Medium term 1 – 2 years	⇒ Kenya Forest Service (KFS) ⇒ NCC ⇒ Kenya Wildlife Service (KWS) ⇒ Tanzania National Parks (TANAPA)	One technical staff – total 4	15,000	60,000
5. Participatory Project Planning and Implementation		Short term – 3 months	⇒ NCC ⇒ TCC ⇒ DCM ⇒ DCT ⇒ DCS ⇒ DCR	Two staff – total 12	3,000	36,000
6. Benefits sharing from natural resources management		Short term – 3 months	⇒ NCC ⇒ TCC ⇒ DCM	Two staff – total 14	3,000	42,000



Capacity Programme	Building	Duration/Nature of Programme	Institutions	Target per Institutions	Unit costs (US\$)	Total Costs (US\$)
			⇒ DCT ⇒ DCS ⇒ DCR ⇒ KFS			
7. Collection and Storage of genetic materials		Medium term 1 year	⇒ KFS ⇒ KWS ⇒ TANAPA	Two Technical staff – Total 6	10,000	60,000
8. Identification, Impacts Assessment and Mitigation of Genetically Modified Organisms and Biotechnology		Medium term 1 year	⇒ KFS ⇒ KWS ⇒ TANAPA	Two Technical staff – Total 6	10,000	60,000
9. Training of Trainers (ToT) on wildlife management		Short term – 3 months	⇒ NCC ⇒ TCC ⇒ DCM ⇒ DCT ⇒ DCS ⇒ DCR	Two members/staff – total 12	5,000	60,000
10. Training of Trainers (ToT) on Participatory Forest Management		Short term – 3 months	⇒ KFS ⇒ NCC ⇒ TCC ⇒ KWS ⇒ TANAPA	Two members/staff – total 10	5,000	50,000
11. Training of Payment of Environmental Services Schemes (PES)		Short term – 3 months	⇒ KFS ⇒ NEMA ⇒ WRMA ⇒ Lake Victoria Water Office	One per institution – total 4	3,000	12,000
12. Training of Trainers on reading of water monitoring equipment and reporting		Short term – 3 months	⇒ WRMA ⇒ Lake Water Office	Three per institution – total 6	3,000	18,000

<b>Capacity Programme</b>	<b>Building</b>	<b>Duration/Nature of Programme</b>	<b>Institutions</b>	<b>Target per Institutions</b>	<b>Unit costs (US\$)</b>	<b>Total Costs (US\$)</b>
13. Training of Trainers on entrepreneurship and business planning in NRM		Short term – 3 months	⇒ KFS ⇒ WRMA ⇒ Lake Office ⇒ NCC ⇒ TCC ⇒ DCM ⇒ DCT ⇒ DCS ⇒ DCR	One per institution – total 9	3,000	27,000
14. Computers and accessories			⇒ NEMA	Three	2,000	6,000
<b>Total</b>						<b>578,000</b>

## **7. LINKAGES**

### **7.1 Proposed Linkage Formats**

To actualize the proposed linkages, the following formats are proposed:

#### **7.1.2 Technical Advisory Committees**

This will consist of technical staff of lead institutions. The committees will allow for an integrated approach and also joint management within the forestry, water, and wildlife sectors.

#### **7.1.2 Development and Implementation of Participatory Management Plans**

This will entail joint formulation and implementation of natural resources management plans.

#### **7.1.3 Joint Implementation Units/Committees/Plans for Management of Natural Resources**

Joint implementation will allow for synergy among different players and also reduce overlap. In, for example, riverine planting, joint management will ensure that the activity is well coordinated and continuous.

Joint implementation will also allow for more benefits accruing to communities, as costs will reduce and so will competition among players.

#### **7.1.4 Forums for Information and Experience Sharing**

This will be quarterly or half yearly forums among the key institutions and communities. It will allow them share and learn lessons from each other for overall improvement of natural resources management.

#### **7.1.5 Establishment of Focal Persons/Points for Linkage with Other Institutions**

This will see the identification of persons or departments/sections in an institution who will be responsible for ensuring linkages between institutions and community groups.

## 7.1.6 Undertaking Research and Disseminating Findings

This will be spearheaded by the research institutions who will endeavour to undertake research, disseminate findings and build the capacity of implementing institutions.

## 7.2 Linkage Recommendations

Institutions/Stakeholders	Linkage Recommendations
<b>INSTITUTIONS</b>	
1. National Environmental Management Authority -NEMA	<ul style="list-style-type: none"> <li>⇒ Links with regional environment programmes such as NEPAD, LVEMP, UN Agencies etc</li> <li>⇒ Strong links with local authorities such as Bomet, Narok and Trans Mara county councils</li> <li>⇒ Strong links with KFS, Ministry of Water for coordinated approach</li> <li>⇒ Strong Links with WWF</li> <li>⇒ Link with local structures such as the CFAs and WRUAs through the environmental committees</li> </ul>
2. Kenya Forest Service (KFS)	<ul style="list-style-type: none"> <li>⇒ Better linkages and benefit sharing with CFAs</li> <li>⇒ Linkages with police – joint operations where possible</li> <li>⇒ Linkages with prosecutors – or training own prosecutors and ensuring their gazettelement</li> <li>⇒ Develop synergy with other players</li> <li>⇒ Linkages with WRUAs and WRMA for better coordination of natural resource management\</li> <li>⇒ Linkages with Ministry of Agriculture to support commercial wood lots where possible</li> <li>⇒ Link with Ministry of Livestock Management for improved water and soils conservation</li> <li>⇒ Liaise with schools for seedlings production and tree planting initiatives</li> <li>⇒ Link strongly with Timsales, comply and others involved in commercial tree production. Link WWF, LVBC, AWF, GBM. KFWG, for better coordination of conservation activities</li> <li>⇒ Link with FED in Tanzania for experience and lesson sharing.</li> </ul>
3. Narok County Council (NCC)	<ul style="list-style-type: none"> <li>⇒ NEMA should share environmental assessments and audits with NCC</li> <li>⇒ Should have more linkages with MoT on lodges and camps</li> <li>⇒ Should have joint committees for synergy in implementation</li> <li>⇒ Should liaise with KFS, WWF, KWS, ICS, GBM, COMOFORM, KFWG and NEMA for a more coordinated approach in management of natural resources and for capacity development</li> </ul>
4. Transmara County Council (TCC)	<ul style="list-style-type: none"> <li>⇒ Establish closer links with other local authorities such as Narok county council for mutual sharing and coordination of activities.</li> <li>⇒ Link with WWF, KFS, KWS, ICS, LVBC and Mara Conservancy for capacity development and synergy in conservation measures</li> </ul>
5. Kenya Wildlife Service (KWS)	<ul style="list-style-type: none"> <li>⇒ Linkages with communities on formation of conservancies</li> <li>⇒ Linkages with WRUAs and CFAs for more coordinated approaches</li> <li>⇒ Link with the private sector and Ministry of Tourism for possible investments into the tourism sector</li> <li>⇒ Link strongly with the county councils for the management of the MMNR</li> <li>⇒ Link with WWF. AWF, KFS, KFWG, LVBC for better coordination in natural resources management and conservation</li> </ul>
6. Water Resource Management	<ul style="list-style-type: none"> <li>⇒ Maintain close links with WRUAs for capacity development</li> </ul>

<b>Institutions/Stakeholders</b>	<b>Linkage Recommendations</b>
Authority (WRMA)	<ul style="list-style-type: none"> <li>⇒ Strongly link with TBWUAs for better coordination in management of water resources</li> <li>⇒ Liaise strongly with WWF, KFS, for collaboration in the management of water catchment areas.</li> <li>⇒ Links with NEMA enforcement of water safety standards</li> <li>⇒ Link strongly with local authorities to streamline use and management of water resource</li> </ul>
7. Ministry of Tourism (MoT)	<ul style="list-style-type: none"> <li>⇒ Link with KFS, KWS, Local authorities for promotion of eco-tourism</li> <li>⇒ Link with the private sector for more investments in tourism</li> </ul>
8. Ministry of Water and Irrigation - Lake Victoria Basin Water Office (Musoma)	<ul style="list-style-type: none"> <li>⇒ Strong links with the catchment management committees for a participatory approach in conservation and management of water resources</li> <li>⇒ Link with the NEMC ensure good water quality</li> <li>⇒ Link with Ministry of Natural Resources and Tourism for coordinated approach in management of catchment areas</li> <li>⇒ Links with other nongovernmental organizations involved in NRM for coordination and collaboration</li> <li>⇒ Link with district councils</li> <li>⇒ Linkages with Catchment Management Committees, MRCC, TBWUAs, WWF, LVBC, FED, and other key stakeholders for collaboration</li> </ul>
9. National Environment Management Council (NEMC)	<ul style="list-style-type: none"> <li>⇒ Link with local level institutions for capacity building and awareness creation</li> <li>⇒ Link with law enforcements agents to ensure compliance with environmental standards</li> </ul>
10. District Councils of: Tarime (DCT) Rorya (DCR) Musoma (DCM) Serengeti (DCS)	<ul style="list-style-type: none"> <li>⇒ Link with WWF, LVBC, MNRT, Ministry of Water and Irrigation, local level catchment management committees</li> </ul>
11. Tanzania National Parks – TANAPA and Serengeti National Park (SNP)	<ul style="list-style-type: none"> <li>⇒ Link with district councils for exploration of more tourist attraction sites</li> <li>⇒ Linkages with communities on formation of conservancies and promotion of eco-tourism</li> <li>⇒ Linkages with catchment management committees for more coordinated approach towards wildlife and habitat conservation</li> <li>⇒ Link with the private sector and Ministry of Tourism for possible investments into the tourism sector</li> <li>⇒ Link strongly with the district councils for the management of the MMNR</li> <li>⇒ Link with WWF, AWF and LVBC for better coordination in natural resources management and conservation</li> <li>⇒ Link with TAWIRI on research and information generation</li> </ul>
12. Tanzania Wildlife Research Institute (TAWIRI)	<ul style="list-style-type: none"> <li>⇒ Link with academic institutions and research organizations for collaboration</li> <li>⇒ Link with WWF and other stakeholders in carrying out a Knowledge Attitudes and Practices Survey</li> <li>⇒</li> </ul>
<b>STAKEHOLDERS</b>	
13. WWF-EARPO	<ul style="list-style-type: none"> <li>⇒ Developing a TAC on Tanzanian side</li> <li>⇒ Institutionalization of the TEC in Kenya</li> <li>⇒ Link with Forestry and Environment Ministries, Kenya Forests working groups, COMIFORM, Green Belt Movement, Timsales, KWS, EAWS and CFAs in order to boost communal monitoring (scouting) of forests</li> <li>⇒ Forge stronger linkages with community level structures (CFA, local leadership etc) for more effectiveness in management of natural resources</li> </ul>
14. Trans-boundary Water Users Forum (TBWUF)	<ul style="list-style-type: none"> <li>⇒ Strong links with WRMA, WRUAs in management of water resource</li> <li>⇒ Establish links with WWF, Forestry and Environmental Ministries, Kenya Forests working groups, COMIFORM, Green Belt Movement, Timsales, KWS, EAWS, and CFAs for better management of catchment areas.</li> <li>⇒ Link to LVBC for capacity development</li> </ul>

<b>Institutions/Stakeholders</b>	<b>Linkage Recommendations</b>
15. ICS	<ul style="list-style-type: none"> <li>⇒ Linkages with Tanzanian government</li> <li>⇒ Linkages with private sector and donors</li> <li>⇒ Strong linkages with KFS, WWF, Ministry of Environment and Mara Conservancy</li> <li>⇒ Forge linkages with local leaders to make process participatory</li> </ul>
16. Ewaso Ngiro South Development Authority (ENSDA)	<ul style="list-style-type: none"> <li>⇒ Should establish trans-boundary linkages with Tanzania private and public institutions due to its location</li> </ul>
17. Mara Conservancy	<ul style="list-style-type: none"> <li>⇒ Establish strong links with the local structures such as local authorities, WRUAs, CFAs, local leaders</li> <li>⇒ Liaise with KFS, KWS, LVBC Ministry of Water, Ministry of Tourism, Ministry of Environment and Mineral Resources, for better collaboration</li> <li>⇒ Forge links with other conservancies such as the Mara North, Ol Choro Oiroua, Maji moto etc</li> <li>⇒ Link with all other Tourism stakeholders</li> <li>⇒ Establish links with corporate bodies for funding.</li> </ul>
18. Kenya Forests Working Group (KFWG)	<ul style="list-style-type: none"> <li>⇒ Link with KFS, CFAs, WWF, ICS, AWF, GBM for more collaboration</li> <li>⇒ Establish link with counterpart association in Tanzania</li> </ul>
19. Green Belt Movement (GBM)	<ul style="list-style-type: none"> <li>⇒ Link with KFS, WWF, ICS, COMIFORM, Mara Conservancy, Narok and Transmara County Councils,</li> <li>⇒ Establish closer links with CFAs for better coordination and ownership of conservation efforts by the local communities</li> </ul>
20. National Alliance of Community Forest Associations	<ul style="list-style-type: none"> <li>⇒ With CFAs at conservancy level</li> <li>⇒ With KFS at conservancy and national level</li> <li>⇒ With NEMA and WRMA</li> <li>⇒ With other donor and programmes</li> </ul>
21. Community Forest Associations (CFAs)	<ul style="list-style-type: none"> <li>⇒ Must link with all stakeholders involved in management of forest resources due to their primary role in forest conservation and management</li> <li>⇒ Establish links with other development partners to enhance their capacity to generate own resources for sustainability even after project period.</li> <li>⇒ Link with the Ministry of Gender and Social services to benefit from training on group dynamics and conflict management</li> <li>⇒ Link with financial institutions such as banks and other credit organizations</li> <li>⇒ Link with the Ministry of Cooperative Development to explore different opportunities and build their capacity.</li> </ul>
22. Timsales Ltd.	<ul style="list-style-type: none"> <li>⇒ Link with KFS, GBM, WWF, COMIFORM, KFWG, LVEMP, for more coordinated approach in conservation of forests</li> <li>⇒ Have linkages with local communities and CFAs</li> </ul>
23. WRUAs	<ul style="list-style-type: none"> <li>⇒ Maintain strong links with WRMA for capacity development</li> <li>⇒ Link to WWF</li> <li>⇒ Establish links with other development partners to enhance their capacity to generate own resources for sustainability even after project period.</li> <li>⇒ Link with the Ministry of Gender and Social services to benefit from training on group dynamics and conflict management</li> <li>⇒ Link with financial institutions such as banks and other credit organizations</li> <li>⇒ Link with the Ministry of Cooperative Development to explore different opportunities and build their capacity.</li> <li>⇒ Liaise with CFAs for more coordinated approach</li> </ul>
24. Mara River Water Resource Users Association (MRWUA)	<ul style="list-style-type: none"> <li>⇒ Maintain strong links with WRMA for capacity development</li> <li>⇒ Establish links with other development partners to enhance their capacity to generate own resources for sustainability even after project period.</li> <li>⇒ Link with the Ministry of Gender and Social services to benefit from training on group dynamics and conflict management</li> <li>⇒ Link with financial institutions such as banks and other credit organizations</li> </ul>

<b>Institutions/Stakeholders</b>	<b>Linkage Recommendations</b>
	⇒ Link with the Ministry of Cooperative Development to explore different opportunities and build their capacity
25. SCC Vi Agroforestry	⇒ Link with WWF, and local community catchment committees for more effective coordination
26. Mara River Catchment Committee (MRCC)	⇒ Link with TBWUAs, Other catchment management committees, local communities, WWF, FED and other key stakeholders for a more coordinated approach to water management ⇒ Link with WRUAs in Kenya for experience sharing and mutual learning

## Conclusions

## ~~8. Overall conclusions and recommendations~~



## **APPENDICES**

### **APPENDIX 1: TERMS OF REFERENCE**

**TRANSBOUNDARY WATER FOR BIODIVERSITY AND HUMAN HEALTH  
MARA RIVER BASIN (TWB-MRB) PROJECT  
TENDER No. LVBC/TWBH-MRBP/2009-10/CS/03  
TERMS OF REFERENCE (TOR)  
FOR  
MARA RIVER BASIN NATURAL RESOURCES MANAGEMENT  
INSTITUTIONAL CAPACITY NEEDS ASSESSMENT**

#### **1. Introduction**

##### **1.1 Background**

The East African Community/ Lake Victoria Basin Commission (LVBC) has received funds from the USAID East Africa to support Sustainable Development of the Mara River Basin. The project is implemented by both the Republic of Kenya and the United Republic of Tanzania. It is coordinated by LVBC Secretariat and implemented by key stakeholders in Mara River Basin. The overall objective of the project is to promote harmonized Mara River Basin management practices for sustainability.

The specific objectives are to:

- a) Develop and promote the implementation of an appropriate trans-boundary management framework for Mara River Basin
- b) Improve the protection and management of Maasai Mau Forest Blocks resources and Mara riverine forests
- c) Enhance sustainable management of the protected areas of Maasai Mara and Serengeti ecosystems
- d) Improve water resources management in the basin, and
- e) Enhance institutional capacity of the Lake Victoria Basin Commission to undertake its regional mandate

##### **1.2 Need for consultancy**

The Mara River Basin is rich on natural resources. These natural resources are the sources of food and income to about 1.3 million people in the Mara River Basin. The management of these resources depends very much on the management framework in place and involvement of the Natural Resources Management (NRM) key Institutions. A number of NRM Institutions exists in Mara River Basin. However, their efforts are not effectively coordinated and their capacities are more often than not limited. This consultancy is aiming at assessing the capacity needs and gaps of NRM institutions to form the basis for capacity building of the institutions to support management of natural resources in the MRB.

## **2. Objectives of consultancy**

### **2.1 General objective**

The general objective of this consultancy is to assess the institutional capacity needs for natural resources management Institutions working in the Mara River Basin with aim of strengthening their capacity to manage natural resources in Mara River Basin in sustainable manner.

### **2.2 Specific objectives**

The specific objective of the consultancy is:

- I. Assess the capacity needs of the NRM institutions;
- II. Recommend capacity building requirements and its implementation plan

## **3. Scope of the consultancy**

The consultant(s) will identify existing NRM Institutions in Mara River Basin, review their Strength, Weakness, Opportunity and Threats (SWOT) analysis and propose NRM institutions capacity building needs that are necessary to support the sustainable management of natural resources in MRB.

## **4. Tasks of the consultant(s)cy**

The tasks of the consultant (s) will include, but not limited to the following:

- g) Carry out inventory of NRM institutions in MRB;
- h) Assess the NRM Institutions roles, mandate and functions to manage natural resources in Mara River Basin;
- i) Assess the linkages between institutions and their coordination;
- j) Propose appropriate institutional coordination mechanism to maximize efficiency;
- k) Identify capacity gaps; and
- l) Prepare a comprehensive action plan for capacity building

## **5. Methodology**

This shall involve mapping and interviewing key NRM Institutions here including that dealing with Forest, wildlife and Water management in or working Mara River Basin. Detailed methodology and action plan shall be provided by the consultant and agreed with the client.

## **6. Deliverables from Consultant(s)**

- a) Detailed assessment reports of NRM Institutions and capacity needs requirements
- b) Plan for NRM institutional capacity building and estimated costs/ budget

## **7. Duration of Assignment**

The consultancy is expected to take 20 consultancy days. The final report should be produced not later than 31st August 2010.

## **8. Qualifications and Experience required of Consultants**

The study will require consultant(s) with a team of Specialists having the following skills and experience:

- a) The Team Leader shall have a postgraduate degree and professional experience in Natural Resources Economics or Environmental Economics of at least five years; and or Institutional development/ analysis.
- b) Other team members have post graduate degrees in Forest management, Water resources, institutional development, wildlife management and a Socio-economist,
- c) The team members must demonstrate working experience of at least five years with multi-stakeholders, institutions; and interactions with the local institutions, protected area managers, local leaders, politicians and policymakers.

## **9. Reporting**

The consultant will report to the Executive Secretary, LVBC but on a day-to-day basis work closely with the Mara Project Coordinator.

Consultant (s) will be required to produce the following:

- i. Inception report to be delivered seven days after the date of signing the contract.
- ii. Draft Report to be delivered three weeks after presentation inception report
- iii. Final report to be delivered two weeks after submission of the draft report

All reports will be submitted in six hard copies and a soft copy in a CD.

## **APPENDIX 2: SEMI-STRUCTURED QUESTIONNAIRE FOR INDIVIDUAL AND GROUP INTERVIEWS**

1. Name of Institution
2. Name of person interviewed
3. Position in Institution
4. Mandate (s) of the institution (including vision, mission – get strategic plan if available) in the Mara basin
5. Activities undertaken by institution to fulfill mandates in the Mara Basin
6. Activities that institution is unable to fulfill currently though part of their mandate
7. Reasons for being unable to undertaken the above mentioned activities
8. Other Challenges and limitations the institution is facing (organizational/systems (M&E, communications, motivation), resources and their allocation, infrastructure/equipment)
9. Is institution implementing project alone?
10. If No, who are its implementing partners?
11. Are there any trans-boundary partners and what are the linkages like?
12. What linkages does the institution have with others dealing with natural resources management in the MRB
13. What challenges do you have in your linkages with other institutions/organizations
14. What capacity needs does institution have with regard to resources, skills/knowledge/facilities

<b>15. Strengths (internal)</b>	<b>16. Weaknesses (internal)</b>
<b>17. Opportunities (external)</b>	<b>18. Threats (external)</b>

19. How can you leverage your strengths, while improving upon your weaknesses?
20. How can the institution mitigate external risks and profit from opportunities?

### APPENDIX 3: LIST OF PERSONS CONTACTED

<b>Name</b>	<b>Institution</b>	<b>Designation</b>
1. Dr Tom O. Okurut	Lake Victoria Basin Commission	Executive Secretary
2. Mr. Stanley B. Matowo	Lake Victoria Basin Commission	Deputy Executive Secretary, Projects Development
3. Mr. Samuel Kerungu Gichere	Lake Victoria Basin Commission	Deputy Executive Secretary, Finance and Administration
4. Mr. Matano A. Saidi	Lake Victoria Basin Commission	Project Development Officer
5. Mr. Qureish Noordin	Lake Victoria Basin Commission	Project Coordinator
6. Mr. Anthony Maina	Interim Coordinating Secretariat on Mau Forest	Deputy Director (KFS) and member ICS
7. Mr. Francis Ole Nkako	ICS WWF	Member Policy Officer
8. Mr. Michael Gachanja	East Africa Wildlife Society/ Kenya forest Working Group	Officer in charge- Kenya Forest Working group
9. Mr. Clement Kariuki	National Alliance of Community Forest Associations	Chairman
10. Dr. Kinyanjui	National Alliance of Community Forest Associations	Volunteer
11. Ms. Mary Wangui	National Alliance of Community Forest Associations	Office Administrator
12. Mr. Kareko Kiunga	Worldwide Fund for Nature (WWF)	Responsible for forestry matters
13. Mr. Cosmas Ikiugu	KFS	Head, Mau Forest Conservancy
14. Mr. Alfred Abongo	KFS	Deputy Head, Mau Forest Conservancy
15. Mr. Mukira	KFS	Deputy Head, Mau Forest Conservancy
16. Mr. William Kelelwa	KFS	Assistant Manager, Narok Zone office
17. Mr. Sylvester McOdero	KFS	Assistant Manager, Elburgon Zone office
18. Ms. Monica Masinde	KFS	Zone Manager, Transmara
19. Dr. Bernard Kigomo	KEFRI	Deputy Director
20. Mr. Evans Muriithi	KWS	Researcher, Narok Station
21. Mr. Wandeto	KWS	Deputy Warden , Transmara
22. Mr. Omulambi	KWS	Warden, Transmara
23. Mr. Kahuthia	Ministry of Tourism	Head, Central Rift Office
24. Mr. Ernest S Mathuva	Ministry of Tourism	Senior Tourist Officer
25. Mr. Kevin Gichangi	WWF	Forestry, Nile Basin Initiative, Narok Office

26. Ms. Doris Ombara	WWF	
27. Dr. Hamisi Seif Mutinda	WWF	
28. Mr. Peter Bwogero	ENSDA	Manager, Natural Resources Management
29. Mr. Edward Wageni	GBM	Deputy Executive Director
30. Mr. Peter Mwangi	GBM	Project Officer
31. Mr. Kopejo	NEMA	Provincial Environment Education Officer Nakuru
32. Mr. Cliff Barkatch	NEMA	DEO Molo/Njoro
33. Mr. Leonard Tampushi	NEMA	DEO Narok South/Bomet
34. Mr. Moses Morentat	NEMA	DEO Transmara
35. Dr. Margaret Abira	WRMA	Regional Manager Lake Victoria South Catchment
36. Mr. Willis O. Memo	WRMA	Sub-Regional Manager Kericho
37. David Mutai	Ministry of Water	District Water Officer Lake Victoria South Water Services Board-Transmara
38. Mr. Gonzaga Mungai	Eco-tourism Kenya	
39. Mr. Fredrick Njau	Kenya Forest Working Group	
40. Mr. Nelson Makhanu	KFWG	
41. Mr. William Deed	Mara Conservancy	
42. Mr. Bernard Barsumei	Bomet Municipal Council	Mayor
43. Mr. Kennedy Onyango	MRWUA	
44. Mr. Ogada	Timsales	
45. Mr. Daniel Twala	Transmara County Council	Town Clerk
46. Mr. Joseph Nandrie	Mara Regional Forestry and Environment Office Musoma	Advisor,
47. Mr. Charles Kaare	BMU, Musoma	Chairman
48. Mr. Rawi David Manyama	BMU, Musoma	Member
49. Mr. Ngoda Ahmed	Mara River Basin	Assistant Project Manager
50. Mr. Suleiman Nyakwarolando	Lake Victoria water Office Musoma	Ag. Head
51. Mr. William Kasanga	MRBMI, Musoma	Project Manager
52. Mr. Eleuiter Nywage	Musoma Rural District	District Natural Resources Officer
53. Mr. Kedman Chipanyanga	Musoma Rural District	District Forestry Officer
54. Mr. Mongeleme Warioba Chacha	Musoma/ Rorya districts boarder	Rorya District Local Community