

**LAKE KYOGA INTEGRATED
MANAGEMENT ORGANISATION**

LAKE KYOGA MANAGEMENT PLAN

2004 – 2007

5th AUGUST

This document may be referred to as follows:

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Author:

LAKIMO

The conclusions and recommendations given in this and other reports in the LAKIMO series are those considered appropriate at the time of preparation. They may be modified in the light of further knowledge gained at subsequent stages of the development and management of Lake Kyoga.

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FOREWARD

Lake Kyoga is a complex system of a major and minor lakes, with extensive wetlands, upon which thousands of households depend for their livelihoods. Managing the lake for sustainable use, poverty reduction and economic growth is a major challenge, bringing together ten districts and hundreds of communities. These districts are Apac, Kaberamaido, Kamuli, Katakwi, Kayunga, Kumi, Lira, Nakasongola, Pallisa and Soroti.

The districts have come together with all fisheries communities, formed into Beach Management Units, and community wetland user associations to create the Lake Kyoga Integrated Management Organisation (LAKIMO).

LAKIMO is proud to present its first lake management plan, which will guide all members of the organization in working towards poverty reduction through sustainable management of the lake natural resources.

This plan is the culmination of several years of investigations, planning and institution building, involving local governments, local communities and central government agencies. The activities involved in this process were supported by the UK Government's Department for International Development, through the Integrated Lake Management project. I would like to thank both ILM and DFID for their tremendous support and guidance.

I look forward to working with communities, through Beach Management Units and wetland user associations, with all levels of local government within the ten co-operating Districts, central government institutions and development partners in implementing this plan.

LAKIMO, and the implementation of its management plan, serves a unique geo-political role bringing together the north and south of Uganda, including districts that have suffered greatly from many years of conflict. LAKIMO offers an opportunity for the districts and communities to develop together, support and learn from each other, tackle the challenges of poverty, HIV/AIDS, lack of sanitation and clean drinking water, as well as ensure that fish production increases and that all people in BMUs benefit from improvements in the fisheries resource.

Eng. Stephen Dagada
Chair of LAKIMO

ACKNOWLEDGEMENTS

The implementation of the integrated lake management approach, of which the development of this plan is a part, was facilitated by support provided by the UK Government's Department for International Development (DFID), channelled through the Integrated Lake Management project (ILM)¹. LAKIMO gratefully acknowledges their support and participation in the development of this plan.

The contributions of members of the sub-groups of LAKIMO's Planning and Finance Committee and the Fisheries Management Committee formed to draft this plan are gratefully acknowledged.

The Lake Kyoga Monitoring and Evaluation Taskforce and members of the Institutional Development Working Group also made significant contributions to the development of this plan. They are thanked for their contribution and for their work in the development of LAKIMO and its monitoring and evaluation activities.

The Beach Management Units that contributed to identifying planning priorities are also thanked for their contribution.

The following national government agencies and departments also contributed to the development of this plan:

- Department of Fisheries Resources
- Directorate of Water Development
- Wetlands Inspectorate Division
- National Environment Management Authority

LAKIMO thanks these agencies for their involvement in the development of LAKIMO and in the drafting of this plan and look forward to their continued support and contributions.

¹ The ILM project is being implemented by a consortium of the Marine Resources Assessment Group (MRAG), based in London, and CARE International in Uganda, between 1999 and 2004.

EXECUTIVE SUMMARY

The Lake Kyoga Integrated Management Organisation (LAKIMO) was formed in March 2004 by the ten districts bordering Lake Kyoga, Soroti, Katakwi, Kaberamaido, Kumi, Pallisa, Kamuli, Kayunga, Nakasongola, Apac and Lira, together with the 192 Beach Management Units (BMUs) and representatives of key lead agencies.

To achieve the aim and objectives of LAKIMO, a lake management plan has been developed, the Lake Kyoga Management Plan (LKMP). This plan is required under the LAKIMO Constitution and is the operational plan for LAKIMO.

The vision to be achieved through the implementation of the plan is:

Good standards of living, free from poverty, within lake dependent communities by using and sustainably managing productive natural resources in a clean and healthy environment.

This plan sets out an integrated approach to lake management, with actions to be taken in the following areas:

- Improve the capacities of management institutions to ensure they are operating effectively.
- Support the generation, dissemination and use of information for planning, management and development.
- Improve delivery of, and access to, services, including fisheries infrastructure, feeder roads, water transport, potable water, sanitation, health, HIV/AIDS interventions and education.
- Improve fisheries management so that production is sustainably increased and equitably accessed.
- Sustainable management of environment and natural resources.

The implementation of the LKMP will involve many stakeholders and partners, and will require integration of issues and actions into the work plans and operational plans of partners, and local government development plans through the planning processes.

The plan includes a monitoring and evaluation plan, to assist LAKIMO in assessing progress in achieving targets.

The LKMP will be reviewed on an annual basis and rolled over within the three-year time frame. Further funds for the implementation of the plan and to support the operation of LAKIMO will be sought.

ABBREVIATIONS AND ACRONYMS

ADB	African Development Bank
BFP	Budget Framework Paper
BMU	Beach Management Unit
CARE	Cooperation for Assistance Relief Everywhere
CAS	Catch Assessment Survey
CBMIS	Community Based Management Information System
CBO	Community based organization
CHAI	Community HIV/AIDS Initiative
CLA	Community Land Association
CSO	Civil Society Organisation
DBMU(C)	District Beach Management Unit (Committee)
DDP	District Development Plan
DEAP	District Environmental Action Plan
DEO	District Environment Officer
DFID	Department for International Development
DFO	District Fisheries Officer
DFR	Department of Fisheries Resources
DP	District Planner
DWD	Directorate of Water Development
DWO	District Wetland Officer
EAP	Environmental Action Plan
EC	Executive Committee (LAKIMO)
EIA	Environmental Impact Assessment
EMCBP II	Environmental Management Capacity Building Programme Phase 2
ENR	Environment and Natural Resources
ES	Executive Secretary
FAL	Functional Adult Literacy
FAO	Food and Agricultural Organisation (UN)
FIRRI	Fisheries Resources Research Institute
FMC	Fisheries Management Committee (LAKIMO)
FMS	Fisheries Management Strategy
FO	Fisheries Officer
FRU	Fisheries Research Unit
FSSP	Fisheries Sector strategic Plan
HPPG	Harmonised Participatory Planning Guide
IDWG	Institutional Development Working Group
IFAD	International Fund for Agricultural Development
Ilm	Integrated lake management
ILM	Integrated Lake Management Project
LAGBIMO	Lake George Basin Integrated Management Organisation
LAKIMO	Lake Kyoga Integrated Management Organisation
LC1	Local Council level 1 (village)
LCV	Local Council level 5 (district)
LDG	Local Development Grant
LG	Local Government
LGDP II	Local Government Development Programme Phase 2
LKA	Lake Kyoga Assembly
LKMP	Lake Kyoga Management Plan
LOGICS	Local Government Information Communication System
LPEC	Local Production and Environment Committee
LRA	Lord's Resistance Army
LSC	Landing Site Committee
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries

MCS	Monitoring, Control and Surveillance
M&E	Monitoring and Evaluation
MoLG	Ministry of Local Government
MOV	Means of verification
MWLE	Ministry of Water, Lands and Environment
NAADS	National Agricultural Advisory Services
NBI	Nile Basin Initiative
NEMA	National Environment Management Authority
NIMES	National Integrated Monitoring and Evaluation Strategy
NGO	Non Governmental Organization
NRSP	Natural Resources Systems Programme
NUSAF	Northern Uganda Social Action Fund
OVI	Objectively Verifiable Indicator
PAF	Poverty Action Fund
PDP	Parish Development Plan
PEAP	Poverty Eradication Action Plan
PEAP	Parish Environmental Action Plan
PFC	Planning and Finance Committee
PMA	Plan for the Modernisation of Agriculture
PFZ	Prohibited Fisheries Zone
SC	Sub-county
SCBMU(C)	Sub-county Beach Management Unit (Committee)
SDP	Sub-county Development Plan
SEAP	Sub-county Environmental Action Plan
SWOT	Strengths, Weaknesses, Opportunities and Threats
UBoS	Uganda Bureau of Statistics
UNDP	United Nations Development Programme
WAP	Wetlands Action Plan
WID	Wetland Inspection Division
WSSP	Wetland Sector Strategic Plan
WUA	Water User Association

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1. BACKGROUND

The Lake Kyoga Integrated Management Organisation (LAKIMO) was formed in March 2004 by the ten districts bordering Lake Kyoga. These are: Soroti, Katakwi, Kaberamaido, Kumi, Pallisa, Kamuli, Kayunga, Nakasongola, Apac and Lira, together with the 192 Beach Management Units (BMUs), wetland management associations and representatives of key national institutions and local non-governmental organisations (NGOs).

The organisation was formed to provide a framework for coordination and coherence in the integrated, participatory planning and sustainable management of Lake Kyoga natural resources for the socio-economic benefit of lake dependent communities. To do this, a lake management plan has been developed, known as the Lake Kyoga Management Plan (LKMP). This plan is required under the LAKIMO Constitution and it will guide the activities of LAKIMO for a period of three years (2004-05 to 2006-07), to be reviewed and rolled over during this period, in line with local government development planning.

The plan sets out an integrated approach to lake management, with actions to be taken in the following areas:

- Improving the capacities of management institutions to ensure they are operating effectively.
- Supporting the generation, dissemination and use of information for planning, management and development.
- Improved delivery of, and access to, services, including fisheries infrastructure, road and water transport, water supply and sanitation, health, particularly HIV/AIDS interventions, and education.
- Increasing sustainable fisheries production and ensuring equitable access to resources.
- Improving the sustainable management of environment and natural resources.

The plan sets out the challenges to sustainable management and improved livelihoods found in these areas and actions that will be undertaken by LAKIMO to address them. In many cases, action will include lobbying other organisations to take action and commit funds and other resources to the areas highlighted in the plan and build capacity amongst LAKIMO stakeholders to tap into existing opportunities. A monitoring and evaluation plan is included to facilitate implementation and annual review.

The plan also includes a background to the lake and the formation of LAKIMO, setting the scene for the improved, co-ordinated and integrated management of Lake Kyoga.

2. THE LAKE KYOGA SYSTEM

2.1 Environmental Background

Lake Kyoga is the largest of a complex of lakes contained within the Lake Kyoga Basin, including Lake Kwania, Lake Bisina, Lake Opeta and about 28 smaller lakes ranging in size from less than 100 hectares to over 10,000 hectares and spread across the northern and eastern side of lake Kyoga. It is one of five major lakes systems in Uganda and is situated between longitudes 32° 10' and 34° 20' East, and between 1° 00' and 2° 00' North (Figure 2.1).

The Kyoga basin lies downstream of Lake Victoria, opening out from the Victoria Nile, and drained through the Kyoga Nile connecting to Lake Albert. The majority of the water flow (over 90%) comes from Lake Victoria with additional flows from the Elgon Mountains.

The Kyoga lakes have numerous creeks and inlets, with the edges bordered by wetlands. Beyond the wetlands, the shoreline is characterised by a series of low hills and flat valleys with the exception of the Mount Elgon and Moroto. The literature on the environment of Lake Kyoga give various area estimates as illustrated in Table 2.1.

Table 2.1 Estimates of the area of Lake Kyoga

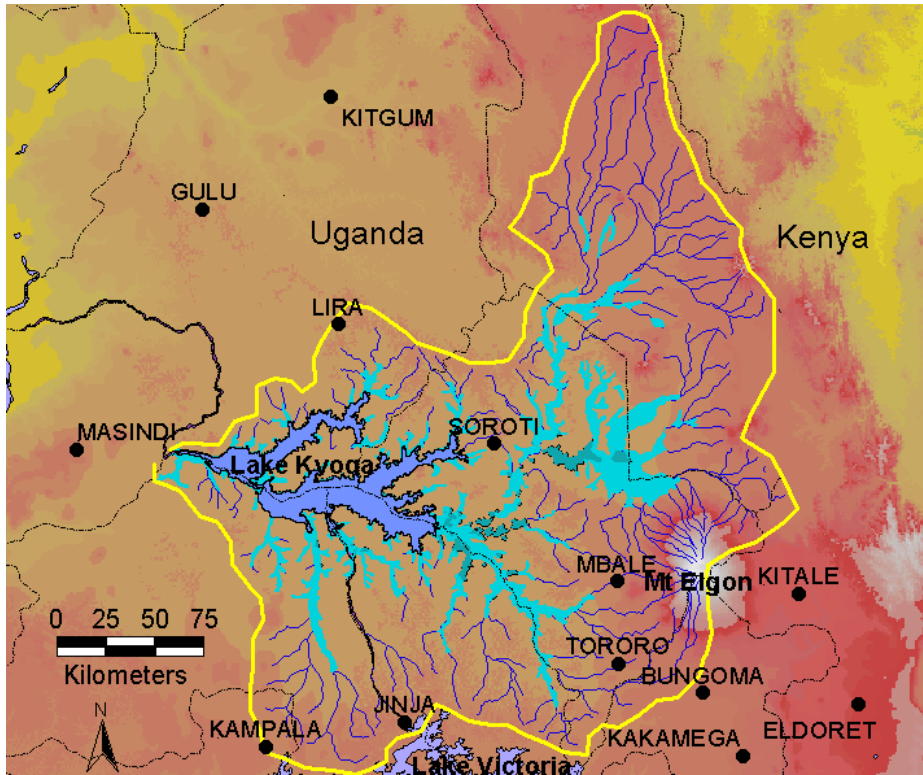
Description of area	Estimated area (km ²)	Source
Total open water	2,890	Twongo, T (2001) The Fisheries and environment of Kyoga lakes, FIRRI, ILM 2001
Total permanent wetland area	3,730	
Total temporary wetland area	7,960	
Total catchment area	57,600	
Permanent wetland area	3,118	NEMA, 1996 ¹ cited in NRSP The Ssemwanga Centre / (2001) A review of existing knowledge of wetlands on Lake Kyoga Basin with a focus on people's livelihoods
Seasonal wetland area	7,076	
Lake Kyoga basin area	10,193	
Total open water	2,400	Marriot et al., 1989. North East Uganda Agricultural Development Project.
Total permanent wetland area	300	
Total open water	2,700	FAO, 1999 cited in Allison (2003) Linking National Fisheries Policy to Livelihoods on the Shores of Lake Kyoga, LADDER Working Paper No. 9.
Associated swamps and smaller lakes	2,000	
Total open surface area including the arms	6270	Twinomujuni (2000) Stakeholders workshop on Kyoga Basin Lakes and Rivers, 18th –20th October 2000: Potential impact of dredging on Lake Kyoga Levels

Notes:

1 NEMA (1996) State of the Environment Report

2 FAO (1999) FAO Fisheries Department Country Profile – Uganda. FID/CP/UGA Rev. 1 December 1999. FAO Rome

Figure 2.1 Lake Kyoga and its basin



Information on size (area, length of shoreline) of individual lakes was derived from national mapping surveys using satellite imagery for the period 1989-1992 and aerial photography in 1995. This information was compiled and presented in an ILM commissioned study by FIRRI in 2001 and results are presented in Table 2.2. The size estimates given in Tables 2.1. and 2.2 represent the situation prior to an El Nino flooding in 1998, and are therefore probably lower than sizes prevailing today.

Table 2.2 Characteristics of Kyoga lakes

Name of Lake	Area (km²)	Shoreline Length (km)	Average Depth (m)
Kyoga	1,800	849	3.5
Kwania	783	583	4.0
Bisina	130	112	3.0
Nakuwa	83	99	2.6
Nyaguo	24	39	2.4
Adois	33.3	39	
Nyasala	17	29	
Pachoto	15.7	26	
Kiondo	14.3	39	
Opeta	11	18	
Meito	13.4	26	
Lemwa	10.4	23	3.1
Kawi	9.4	17	3.5
Gawe	7.4	28	
Owapet	7.1	33	
Nawampasa	7	17	2.6
Gigati	6.7	25	2.4
Naragaga	4.8	15	
Agu	2.7	8	2.0
Kodiki	1.8	9	
Ajama	0.8	3	
Opere	0.4	5	
Samere	0.3	3	

Source: In Twongo, 2001 quoting area and shoreline length data digitised from satellite images (1989-1992) from National Biomass Study, Kampala

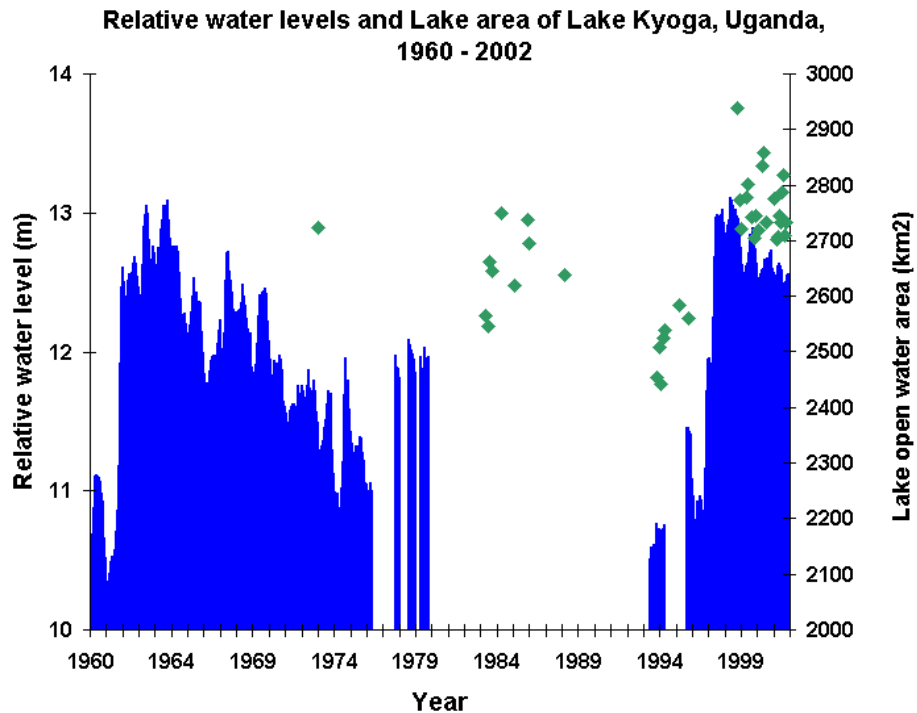
The Kyoga system is characterised by high hydrological variability leading to large fluctuations in lake levels, water surface areas, shoreline lengths and associated changes in flora and fauna. During the early part of the last century, Kyoga and Kwania were shallow swamps with little open water. The most important hydrological event in recent history was the sudden, drastic increase in lake level following very heavy rains in the early 1960s that resulted in considerable expansion of open water areas of the lakes (Figure

2.2). Water levels and lake surface area declined in a fluctuating manner during the next two decades until a second major flood event occurred as a result of El Nino rains in 1997/98.

This flood event caused a large number of papyrus sudds to be released from the shoreline and to float downstream towards the Nile outlet of the lake. At the point of narrowing at the outlet, the sudds became jammed and formed a blockage in early 1998. As more floating sudds continued to drift downstream, they added to the bottleneck, forming a papyrus blockage 16 km long and over 80 km² in area. This vegetative blockage slowed water flow from the Nile outlet and raised water levels by 2 m in 1999-2000. Two channels were opened by DWD in 2001-2002 but prevailing lake levels are still raised by 1.3 m due to the blockage. As in the 1960s, the flooding had both harmful and beneficial impacts. Fisheries benefited most by increased water surface area, increased water depths, increased shallow water areas along shoreline providing protected fish breeding and nursery grounds.

There are plans to mechanically remove the blockage, with support from Egypt, but first an Environmental Impact Assessment (EIA) must be undertaken. DWD is providing financial support to complete the EIA in 2004. In terms of long-term environmental management, a solution must be sought to avoid similar blockage by floating papyrus sudds during extreme flood events.

Figure 2.2



Source: DWD data, 1960-2002

2.2 Institutional and socio-economic background

Ten districts border Lake Kyoga, including 49 sub-counties and 127 Parishes. The Lake Kyoga system contains some of the poorest districts nation-wide. The poorest in the system, measured by the selected indicators given in Table 2.3, are Katakwi, Kumi and Kaberamaido/Soroti. The relatively best off district according to these indicators is Kayunga. Highest population densities are found in the southern districts of Pallisa, Kamuli and Kayunga. These districts also have the lowest population growth rates in the system.

Table 2.3 District Development Profiles

District	Human Development Index	District Human poverty index	Life Expectancy	Literacy rate	Household expenditure	Pop growth rate (%)	Pop. Density per km ²
Lira	0.41	35.2	44.7	56	14,571	3.6	124
Apac	0.44	33.1	47.9	64	14,311	3.4	115
Nakasongola,	0.46	40.9	44.6	65	23,388	1.9	38
Kayunga	0.47	27.0	43.1	70	28,855	2.0	213
Kamuli	0.42	31.5	46.5	55	20,825	3.3	219
Pallisa	0.42	37.6	46.0	57	18,311	3.2	329
Soroti & Kaberamaido	0.40	32.9	43.0	50	18,549	5.1 Sor 3.5 Kab	107 Sor 99 Kab
Katakwi	0.38	39.5	43.0	44	16,598	6.5	86
Kumi	0.40	36.6	42.8	56	17,940	4.2	159

Source: Compiled from Uganda Human Development Report 2002, UNDP; population growth and density: UBOS provisional census results, 2002.

Within the ten districts there are 192 BMUs, mostly located along the shores of Lake Kyoga and Lake Kwania. These BMUs have been formed from 420 fish landing sites. On average, there are 4 BMUs per sub-county and between one and two per parish (Table 2.4). Table 2.5 shows the number of BMUs on each water body.

Table 2.4 BMUs in each district, sub-county and parish on Kyoga

District	No. Sub-counties	No. Parishes	No. BMUs	No. BMUs per sub-county	No. BMUs per parish	Water bodies
Lira	7	29	41	5.9	1.4	Kwania/Kyoga
Apac	3	14	24	8.0	1.7	Kwania/Kyoga
Nakasongola	5	12	22	4.4	1.8	Kyoga
Kayunga	1	2	5	5.0	2.5	Kyoga
Kamuli	7	21	26	3.7	1.2	Kyoga
Pallisa	4	9	11	2.8	1.2	Kawi/Nyaguo/Nyansala Gulumaire/Gigate/Kayi, Lemwa
Soroti	8	16	30	3.8	1.9	Kyoga
Kaberamaido	5	9	15	3.0	1.7	Kyoga
Katakwi	3	7	7	2.3	1.0	Bisina/Opeta
Kumi	6	8	11	1.8	1.4	Bisina/Opeta/Nyaguo, Gowa
Total	49	127	192	3.9	1.5	

Source: BMU registrations forms sent to DFR

Table 2.5 Number of BMUs on each water body

Water body	No. of BMUs
Kyoga	136
Kwania	30
Bisina	11
Opeta	4
Nyaguo	4
Gawa	1
Nyansala	1
Kayi	1
Gigate	1
Lemwa	1
Kawi	1
Gulumaire	1
Total	192

Source: BMU registrations forms sent to DFR

The way in which the BMUs and their associations come together with all levels of local government to form LAKIMO and co-operate in the management of Lake Kyoga is described in Chapter 5.

2.3 Uses of Lake Resources

The lake provides an important source of livelihoods, particularly for people involved in fisheries. The uses of the lakes and associated wetlands and rivers include:

- *Water:* The dominant supply of water for surrounding districts is from underground sources including springs and wells that originate from the lake. Water is also used directly from the lake for domestic and industrial uses.
- *Fisheries:* It is estimated that as many as 200,000 people depend on fishing for their livelihoods around Lake Kyoga. Local government benefit from fisheries related revenues including licensing and taxes. Fish contributes to food security, providing at least 30,000 tonnes which is sufficient to feed 3 million people at the average annual per capita consumption rate of 10kg.
- *Wetlands:* Wetlands provide water transport, biomass potential/production (e.g. harvesting papyrus), food (especially fish, wild vegetables and fruits), nutrient (effluent) retention, facilitate ground water recharge and retention, sediment and toxins retention, control of floods, micro-climate stabilization, hunting grounds for wild game (meat) and birds, and recreation and heritage values, including potential for tourism.
- *Wildlife and biodiversity:* The lake and its environment contribute to conservation and tourism by providing a habitat for wildlife. NEMA has recognised the Kyoga lakes as being important for biodiversity. Lake Opeta is a candidate for international RAMSAR recognition.

- *Transport*: Transport across the Kyoga lakes is used to ferry people and goods and is an important means of trade. Transport is in the form of locally made small boats, though ferries are critical for good transport on Lake Kyoga and to improve links between the north and south of Uganda.
- *Climate*: The lake and wetlands influence the climate of the region, so degradation of the natural resources could have adverse impacts on the micro-climate.

Fisheries resources

Up to the 1950s, the Kyoga fishery was relatively undeveloped and based on native species such as the tilapias *Oreochromis esculentus* (ngege), *O. variabilis*, the lungfish, *Protopterus aethiopicus*, the catfish, *Bagrus docmac* and *Clarius gariepinus* and the butterfish, *Schilbe mystus*. In the mid-1950s, Nile perch, *Lates niloticus*, and three tilapiine species, Nile tilapia, *O. niloticus*, *O. leucostictus* and *Tilapia zilli* were introduced into the lake from Lake Albert. Major changes in the fishery later took place coinciding with the massive increase in lake area and depth due to the exceptionally heavy rains in the early 1960s. This provided ideal conditions for a population explosion of Nile perch and Nile tilapia. Estimated total fish catches increased from 18,000 t in 1965 to 167,000 t in 1978. These increases were due to the increased abundance of these two species.

A productive fishery operated for just over a decade, after which there was a progressive decline in the fishery reportedly due to the use of surround/seine nets and small mesh nets catching juvenile fish. As catches increased so did infrastructural development in the form of ice plants, jetties, markets and roads at major fish landings, particularly those on the southern shore. Much of this development was supported from 1983-1991 by the IFAD and World Bank funded project "Support for the Rehabilitation of the Lake Kyoga Fisheries". The infrastructure established by this project is now derelict and the fishery is threatened by various factors (see chapter 6 for details). As the catches of Nile perch and Nile tilapia decreased, fishermen turned their attention to the capture of a small cyprinid *Rastrineobola argentea*, (mukene or omena) captured in very small mesh surround nets at night using light attraction. This species is today one of the top three commercially important species in the lake. Although estimates of total catch are produced by DFR for Lake Kyoga, these are very uncertain since there has been no reliable method used for collecting catch data for decades. The present management plan will address this issue in the coming years.

The native tilapiine species declined as the larger exotic species increased in abundance. Today, some of the small lakes in the Kyoga system serve as refuges for these species (*O. esculentus* and *O. variabilis*) and as such have significant biodiversity value.

Livelihood dependency on fisheries

A recent study on livelihoods around Lake Kyoga (conducted at 26 landing sites within 4 districts) found that 80% of households are dependent on the lake's fisheries (which was defined as the following sources of income:

owning a boat, working as boat crew, fish mongering and processing, boat makers and net repairers) (ILM, 2004). Even those income sources that are not directly dependent on the lake are still dependent in terms of relying on the income of those involved in fisheries. These include traders, restaurant owners, women cooking food for sale and the sale of agricultural produce.

There is little variation in sources of income during the year and the vast majority of income generating activities are carried out at the landing site, or very near it. Whilst there were many people reported to stay at the landing sites for a short period for work each year, most people live at the sites permanently. The average length of time the head of household had lived at the landing site was 14 years.

These findings demonstrate the importance of the fishery to the livelihoods of so many households and highlight that many people stay at landing sites permanently, despite some migration within the sector. This reinforces the need for better provision of services and infrastructure, which are so often lacking within fisheries communities.

One of the major impacts on fishing communities in Uganda, as in many other communities, is the prevalence of HIV/AIDS. There are many impacts on people's ability to secure adequate livelihoods, either through illness, caring for the sick or bereavement. Support and interventions to assist people to cope with the challenges posed by the prevalence of HIV/AIDS are urgently needed within the BMUs of Lake Kyoga.

Wetlands resources

Wetlands on the fringes of Lake Kyoga are important because they support lake fisheries through providing suitable spawning and nursery grounds for the young fish. A study undertaken in 2001 by the Ssemwanga Centre on behalf of the DFID Natural Resources Systems Programme (NRSP) recorded a very wide range of goods and services provided by wetlands in sub-ecosystems of Kyoga. These are summarised in Table 1.3.

Table 1.3 Summary data on the use and values of wetlands in sub-ecosystems of Kyoga

Sub-ecosystem	Population densities as people per km ² and (number of people) in each District	Category of wetland	Human activities in wetlands	Contribution to peoples' livelihoods	Impact on wetlands
1. Mouth /outflow of Kyoga Nile River	Apac 77.2 (454,504) Nakasongola 56.0 (100,497)	Lacustrine papyrus swamp	Fire wood collection & timber harvesting, papyrus harvesting and burning, fishing, grazing, cultivation, water for domestic use, brickmaking, water for livestock	Very important	Heavily Impacted
2. Inflows of lake Victoria Nile River	Mukono (Kayunga) 179.5 (824,604) Kamuli 146 (485,214)	Lacustrine papyrus swamp	Clay extraction and brick making, fishing, grazing, hunt, firewood, transport, water, fruits and vegetables.	Important	Impacted
3. Eastern belt of lake basin river inflows	Soroti 50.5 (430,390) Kumi 96.3 (236,694)	Riverine and Flood plain swamps	Fishing, craft making, water for domestic use, grazing, firewood and timber harvesting, sand extraction, hunting.	Very Important	Impacted
4. Southern belt of lake Kyoga basin	Mukono (Kayunga) 179.5 (824,604) Kamuli 146 (485,241) Pallisa 228.7 (357,656) Kumi 96.3 (236,694)	Riverine and Flood plain swamps	Crafts, medicines, hunting, firewood, timber, water for domestic use, grazing, cultivation, brick-making, fishing, cultural worshipping, fruits, medicine, and gravel-clay extraction, rice growing (Pallisa).	Very Important	Heavily impacted
5. Lake Kwania/Lake Kyoga system area	Lira 81.4 (500,965) Soroti 50.5 (430,390)	Fringing swamps/ wetlands	Cultivation, grazing, brick-making, crafts making, water for domestic use, hunting, fishing timber and firewood collection.	Important	Un-impacted

Source: Adapted from - Ssemwanga Centre 2001, A Review of existing knowledge of wetlands on Lake Kyoga basin with a focus on peoples livelihoods. DFID Natural Resource Systems Programme, Final Report, 2001.

Notes:

Very Important: The people are very dependant on the resources for their livelihoods and have no alternative sources. Without those resources the people would be vulnerable and very poor.

Important: Although the people derive their livelihoods on the mentioned resources, they have other sources of livelihood.

Heavily Impacted: People no longer obtain the resources they used to in the past and where there is evidence of heavy degradation and lost of representative habitats.

Unimpacted: People can still rely on the wetland to obtain resources without noticeable decline over the past few years and where the wetland still has representative habitats.

Impacted Anything between the heavily impacted and unimpacted.

These scales were based on results of the interview with the stakeholders in the Kyoga Basin.

3. INTEGRATED LAKE MANAGEMENT APPROACH

The formation of LAKIMO and the development of an integrated lake management plan represent the fruits of the implementation of an innovative integrated lake management (ilm) approach in Uganda. Such an approach is essential for addressing the fisheries, environmental and socio-economic challenges outlined above.

The aim of such an integrated approach is poverty reduction through improved livelihoods resulting from sustainable management of lake natural resources. The approach is integrated in the following ways:

- Lake wide management, bringing together the interests of all those using and managing the lake.
- Inter-district, including bringing all three levels of local government (Parish, Sub-county and District) together from ten districts.
- Inter-sectoral, involving sectors such as fisheries, environment, water, wetlands and community development, to provide a holistic approach to lake management, recognising the interrelatedness of the system and livelihoods.
- Inter-stakeholder, bringing together many types of stakeholders, all concerned with the improved and sustainable use and management of Lake Kyoga resources for improved livelihoods.

The implementation of this approach depends upon the co-operation and commitment of local governments and community members, which is evidenced by the formation and operation of the BMUs and LAKIMO.

3.1 LAKIMO Vision

The Vision of LAKIMO, as set out in its Constitution, is:

Good standards of living, free from poverty, within lake dependent communities by using and sustainably managing productive natural resources in a clean and healthy environment.

This vision serves as the goal for the implementation of this plan. The purpose of the plan is:

To improve livelihoods and reduce poverty within lake dependent communities through sustainable management of natural resources

The goal and purpose will be achieved through the implementation of activities to deliver key outputs that are essential for improved livelihoods through sustainable natural resource management. The identification of these outputs was undertaken during the development of the plan, the process of which is described below.

3.2 Development of a Lake Management Plan

This lake management plan is a result of many activities, including the formation of LAKIMO and capacity building of stakeholders. The Integrated Lake Management (ILM) project supported the implementation of the integrated lake management approach through facilitating:

- The development of institutional frameworks;
- Capacity building of local government and community members;
- The development of a lake wide management plan;
- Monitoring and evaluating the implementation of the approach;
- Lesson learning for influencing the formation and implementation of central and local government policy and legislation.

The development and implementation of the plan is then a culmination of activities in support of integrated lake management.

The drafting of the plan itself began in January 2004. Two meetings were held with the following participants, to begin the process of drafting the plan:

- The Lake Kyoga Monitoring & Evaluation (M&E) task force.
- Some members of the Institutional Development Working Group to ensure representation from all districts and inputs from different sectors within local governments.
- Representatives from the Department for Fisheries Resources (DFR), Wetlands Inspection Division (WID), National Environment Management Authority (NEMA) and the Directorate of Water Development (DWD).
- ILM staff.

This approach enabled the plan to be drafted in just a few months. The reasons for this approach were to:

- Enable input from the existing M&E taskforce, which had been meeting for nearly a year.
- Enable input from the ILM project, so that the plan is in place before its closure in October 2004.
- Give the new LAKIMO standing committees a good start in the process of developing the plan, when they are new and still learning about their roles.
- Promote the components of the draft plan in local government development planning, before the end of the planning year in June, as well as to potential development partners.

The resources available for the development of the plan did not allow for extensive participation from all levels with the Kyoga system. However, inputs were received from different levels through the following:

- All 192 BMUs were asked to identify their three key priorities through a BMU Assembly meeting. 89% (171) of the BMUs submitted their planning priorities. The results of this exercise were collated and the priorities

across the lake identified and discussed at the second meeting in the development of the plan (February 2004).

- Feedback was received from district and sub-county consultations on the first draft of the purpose, outputs and activities. This is also reported on in the report of the second meeting in the development of the plan.
- National lead agencies also provided information for the plan. These included the National Environment Management Authority and the Wetlands Inspection Division.

A second draft of the outputs and activities was developed. This was presented to, and discussed at, the first meeting of the Planning and Finance Committee (PFC) and the Fisheries Management Committee (FMC) of LAKIMO in April 2004. Sub-groups of these committees then finalised the drafting of the plan and distributed it for comments and amendments.

At the meeting in April, the PFC conducted a SWOT analysis for the identified outputs, to ensure that all challenges and opportunities were identified. A SWOT analysis requires the identification of Strengths, Weaknesses, Opportunities and Threats. The results of the exercise are included in the minutes of the first PFC meeting and were used in writing Chapters 2 and 3.

Information from all of the above sources was used in identifying the key challenges and opportunities, and appropriate actions needed to respond to these.

3.3 Scope of the Plan

The management plan is for the Lake Kyoga system, covering ten districts, the 49 sub-counties, 127 Parishes and 192 BMUs. Much of the plan is concerned with the lake itself and the livelihoods of the lake dependent communities, reached through the BMUs.

The plan is the operational plan for LAKIMO and therefore covers the Lake Kyoga system, described above. It does not, however, include the catchment area of Lake Kyoga. This is due to the size of the Lake Kyoga catchment and the complexity of the system and issues that would be involved. This does not mean that catchment management is too difficult, but that management of the Lake Kyoga system is a substantial first step towards catchment management.

LAKIMO itself brings together almost a fifth of the districts in Uganda, from east to west, with many different challenges, particularly as a result of the long conflict in the north of Uganda, involving the Lords' Resistance Army. These challenges and the size of the operational area of LAKIMO mean that the organisation must make progress at lake system level, before considering expanding into catchment, or basin, management.

There are, however, some issues that must be addressed at a catchment level now, particularly soil erosion, resulting from poor agricultural practices and deforestation, as sedimentation of the wetlands and lake system may

happen at too fast a rate for the ecological functioning of the fishery. LAKIMO's role in this area is to promote the adoption of soil and water conservation methods and tree planting in the co-operating districts, whilst also influencing the National Environment Management Authority and other districts in the catchment of the need to implement appropriate measures.

The plan does not stand outside of the existing local government planning system, but draws on, and must be integrated into, existing plans and systems, at local and national levels, for full and coherent implementation.

3.4 Linkages to Other Plans

Implementation of the LKMP depends largely on integration of components of the plan into local government development plans, at Parish, Sub-County and District levels. This will require members of LAKIMO to disseminate the plan, lobby for inclusion of components of the plan into development plans and promote the plan to development partners.

The LKMP is, then, mainly linked to local government development plans. Development partners active around the lake include the Northern Uganda Social Action Fund (NUSAF), which is active in seven of the LAKIMO districts. NUSAF was formed by the Government of Uganda in 2002 to assist the districts of the north in 'catching' up with the southern districts, having been affected by conflict for so many years.

With regard to fisheries, the African Development Bank has provided a loan to develop infrastructure at several landing sites on Kyoga as well as other major lakes in Uganda. The planned activities under this programme are integrated into the Lake Kyoga Management Plan.

LAKIMO will continue to develop partnerships and form links with other organizations. This will include promotion of the LKMP and integration of its components into the plans of other organizations.

3.5 Guiding Principles of the Plan

The following Guiding Principles have influenced the design of the LKMP and will guide its implementation:

1. The plan is based on a participatory, demand-driven integrated co-management approach implemented through a partnership of civil society BMUs, other CSOs and local governments;
2. Lake management is guided by existing policies and laws and operates within the law;
3. The plan takes into account the diverse interests of many different stakeholders;
4. A poverty focus and gender sensitivity are maintained at all levels of the plan;
5. The management approach will be honest, transparent and accountable.

4. NATIONAL INSTITUTIONAL CONTEXT

4.1 Policies and Laws

The drafting of the LKMP was informed by national policy and institutional frameworks. There are several key overarching policies which informed its development. These are:

- The draft revised Poverty Eradication Action Plan (PEAP) (March 2004), the overarching policy framework for all of the activities of the Government of Uganda.
- The Plan for the Modernisation of Agriculture (PMA), and its component parts, such as the National Agricultural Advisory Services (NAADS).
- Decentralisation, through the Local Government Act 1997, bringing more power to local government, including the management of natural resources, and to communities, through, for example, the Fish (Beach Management) Rules, 2003.

The key national policies and legislation with influence over how Lake Kyoga should be managed include:

- 1964 Fish Act and subsequent amendments;
- 1994 National Policy for Conservation and Management of Wetland Resources
- 1995 Constitution of Uganda
- 1995 National Environment Statute
- 1995 Water Statute
- 1996 Wildlife Policy and Statute
- 1997 Local Government Act, and subsequent amendments
- 2003 Fish (Beach Management Unit) Rules Statutory Instrument No. 35
- 2004 National Fisheries Policy and its associated draft Fisheries Bill, May 2004.

These policies have informed the identification of appropriate objectives and action plans for the LKMP.

It is also important to note the institutional framework within which LAKIMO fits at a national level. LAKIMO is a partner in informing and facilitating the implementation of policies and regulations from many agencies, but the main government departments are:

- Department of Fisheries Resources (DFR), within the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF).
- Ministry of Water, Lands and Environment (MWLE), which contains the Wetlands Inspection Division (WID), the National Environment Management Authority (NEMA) and the Directorate of Water Development (DWD).

- Ministry of Local Government (MoLG) which oversees local governments and provides guidance in a range of areas, including planning, monitoring and evaluation and capacity building.

Water management in Uganda is presently undergoing institutional change, with responsibility being transferred to local levels whereas the central government implement and enforce environmental regulations (e.g. wetland protection). This transitional change opens a window of opportunity for integrating data, information and knowledge relating to natural, socio-economic and institutional functioning with the new decentralised organisation.

No management plans have been previously prepared or implemented on Lake Kyoga. It was essential, therefore, to ensure that the first lake wide plan linked closely with broader national sector plans. These include the Wetland Sector Strategic Plan (WSSP), a ten-year investment plan launched by Government in 2001 and the Fisheries Sector Strategic Plan to be launched in August 2004. The forestry sector has recently undergone major restructuring and during this process, a National Forestry Plan was developed and approved in 2003. The Directorate of Water Resources is also preparing a similar sub-sector plan for water resources management.

4.2 National Approach for Co-management of Natural Resources

Fisheries

The 2004 National Fisheries Policy firmly establishes the co-management of fisheries resources as the way ahead for fisheries management in Uganda.

Co-management of natural resources involves local people and government sharing responsibility for management, planning and development activities. Community involvement in managing natural resources is being promoted for managing land, forests, wetlands, wildlife and fishery resources. Management involves controlling access and use of the resources, so that they are used and managed sustainably, contributing to poverty reduction through improved livelihoods.

Within the fisheries sector, Beach Management Units (BMUs) are being formed at designated landing sites. They are the institutional structure within which fisheries stakeholders will work in partnership with local and central governments, to improve planning and to sustainably manage fisheries resources. The formation of BMUs is required by the 2003 Fish (Beach Management) Rules, statutory instrument number 35.

The new National Fisheries Policy is founded upon principles underpinning wider Government policies that promote, among others, poverty focused and gender sensitive development strategies. It aims at building good governance, transparency and accountability. It also deepens decentralization through participatory fisheries planning and management. This includes marginalized stakeholders, especially poor fishing crew members (barias) and women in

decision-making structures and processes governing the management of resources upon which their livelihoods depend.

At Lake Kyoga, 192 BMUs have been formed, with the aim of ensuring fisheries communities work closely with local and central government to improve the management and use of the lake resources. BMUs have also been formed on Lakes George and Edward, and are beginning to be formed on Lakes Albert and Victoria.

Wetlands

Uganda is one of the most advanced countries in Africa in terms of wetlands conservation and management. This is because wetlands are one of the most vital natural resources, which are widely distributed throughout the country and on which millions of people depend for a living. With support from development partners, a National Wetland Policy was launched in 1995. Almost a decade later, wetland issues are high on the political and public agenda. The Wetland Sector Strategic Plan aims at promoting the wise use of wetlands through community-based management. Community wetland management associations are beginning to emerge, some on Lake Kyoga. Local governments will help local communities develop Wetland Action Plans. These associations have a legal right to membership of LAKIMO through its constitution and will be supported by government wetland officers appointed at district or regional levels.

Water

The Directorate of Water Development aims to decentralise the management of water resources to local governments. District Water Officers will support communities in establishing Water User Associations (WUA). This is in an early stage of development and there are no WUAs yet established on Kyoga. However, such associations, when formed, have a legal right to membership of LAKIMO through its constitution.

Forestry

New opportunities are emerging in Uganda for community management of customary and private forests. The present reform of the forest sector is supported by a revised policy and legal framework for forestry, which introduces options for forest communities to manage forest resources through registration of community forests to qualify for forestry extension benefits. Community forestry is further supported through the legal governance mechanism, the Communal Land Association (CLA), which is legislated for in the Land Act 1998. Communities interested in securing ownership title to customary forest land can, therefore, in principle do so through agreeing to form a CLA.

The CLA (Land Act 1998) and the ability to register community forests (Forest and Tree Planting Bill 2003) provide the legal mechanism to close de facto open access forest resources and govern these as registered common property regimes for the associated user group. These legal governance mechanisms currently form the basis for rethinking forestry management as articulated in the new National Forest Plan (2002).

5. LAKE MANAGEMENT ORGANISATIONS

The development of LAKIMO involved the establishment of an Institutional Development Working Group (IDWG), with representatives from communities, different sectors within the relevant local governments and from national agencies. The IDWG guided the process and undertook consultation with communities, local governments and other stakeholders. The result of the lengthy and in-depth consultative process is LAKIMO and its Constitution.

5.1 Structures

LAKIMO has the following structure:

- The Lake Kyoga Assembly (LKA)
- Executive Committee (EC)
- Fisheries Management Committee (FMC), including the Lake Kyoga BMU Committee
- Planning and Finance Committee (PFC)
- Secretariat
- 10 District BMU Committees (DBMUs)
- 49 Sub-County BMU Committees (SCBMUCs)
- 192 Beach management Units
- Community Wetland Management Associations
- Water User Associations (to be established)
- NAADS fisher & farmer groups (to be established)

The detailed membership and functions of the Assembly, LAKIMO Committees and BMUs and their committees are outlined in the LAKIMO Constitution. It should be noted that every LAKIMO committee includes representatives from BMUs, sub-counties and districts. Representatives were nominated and elected to represent different regions around the lake and different stakeholder interests. In addition, FMC, PFC, DBMUCs and SCBMUCs have developed detailed terms of reference to guide their operations.

5.2 Functions

The following section summarises the functions of the LAKIMO structures, shown in Figure 5.1. Figure 5.2 shows how the BMUs are related at different levels around the lake.

The Lake Kyoga Assembly

This is the highest policy making body of LAKIMO and is made up of representatives of all stakeholders groups. The responsibilities of the LKA include:

- Annually review, update, and approve the LKMP.
- Ensure harmony between management plans and projects to be implemented by different stakeholders, including central government institutions.

- Advocate for integration of the plan into local government development plans and budget cycles.
- Consider the plans, annual budgets, audit reports and other financial transactions of LAKIMO.

The Assembly will meet at least twice a year and will receive reports on LAKIMO activities and from the various committees.

The Executive Committee of the Lake Kyoga Assembly

The Executive Committee commissioned the preparation of the LKMP for its consideration and approval. The responsibilities of the EC are wide-ranging and include,

- Mobilise and sensitise communities on relevant government policies, plans and programmes and ensure that these policies, plans and programmes remain focused on the poor.
- Ensure appropriate interaction of cooperating local governments and their counterparts from central government agencies.
- Ensure that LAKIMO plans and interventions are pro-poor and address the needs and aspirations of community stakeholders.
- Advocate for the incorporation of LAKIMO plans into the district and sub-county development processes and plans, and commission and approve technical assistance, including service provision, to guide and support activities of LAKIMO.
- Identify and mobilize funds for LAKIMO operations.
- Oversee the operation of the LAKIMO Secretariat.

The EC meets at quarterly intervals to approve work plans, technical reports and budgets, and to review the activities of LAKIMO.

The LAKIMO Secretariat

As a support and resource centre for LAKIMO, the Secretariat is responsible for the recording, documentation, dissemination and custody of all information relating to the operations of the organization. In addition, the responsibilities of the Secretariat include:

- Provides support to the other organs of the organization including provision of technical guidance in inter-sectoral planning and coordination as well as implementation of work plans.
- Prepares annual and quarterly work plans and budgets of the organization.

The Secretariat supports the Assembly and committees of LAKIMO.

The Fisheries Management Committee

This committee leads all activities relating to lake wide fisheries planning and management. Its responsibilities include:

- Supporting the development of fisheries information collection and management systems, and promoting the use of this information by BMUs (at all levels) and local government, as well as by the FMC.
- Identify priority issues to be addressed and develop agreed actions to address these issues. These are set out in a Lake Kyoga Fisheries Management Strategy.
- Ensure that priority fisheries management issues identified at LKA meetings are appropriately addressed.

The activities that FMC oversees include the development of by-laws, BMU-led monitoring, control and surveillance, and research undertaken by the LAKIMO Fisheries Research Unit (FRU). The FMC is responsible for overseeing the implementation of any fisheries related activities in this plan.

The FMC is made up of the Lake Kyoga BMU Committee, which has ten members, representing all fisheries stakeholders groups, together with three District Fisheries Officers, a District Planner and a District Environment Officer. The Lake Kyoga BMUC does not meet independently, but is a part of the FMC.

The Planning and Finance Committee

This committee is tasked by the EC to lead on all activities related to planning and finance. The Committee led the development of this plan and will oversee its implementation, including monitoring and evaluating the impacts of implementation. The Committee is responsible for:

- Advocating for the incorporation of the LKMP and BMU plans and activities into the development plans, work plans and budgets of local government and other agencies at appropriate levels.
- Developing and implementing information management systems, closely linked to systems of local government.
- With the EC, the PFC is also responsible for identifying how funds may be raised and ensuring that appropriate audit systems are in place.
- Overseeing actions to address environmental issues highlighted in this plan, in collaboration with national agencies and environment committees at district and lower local government levels.

Sub-County and District BMU Committees

These committees are made up of BMU representatives only, elected by BMU Committee members from within each Sub-County and District respectively. All BMU stakeholder groups are represented and each committee has ten members, three of which must be women. The functions of these committees include:

- Compiling summary data on BMU application forms, registration books and agreed areas of jurisdiction.
- Compiling and disseminating monthly fisheries data.
- Compiling fisheries management priorities and developing and implementing district fisheries management plans.

- Producing quarterly reports for submission to FMC (via DBMUCs).
- Work closely with local governments in development planning and implementation.

These committees provide an essential link between the lake wide structures and the 192 BMUs. They will facilitate consultations, dissemination of information, provision of feedback and co-ordination of activities within fisheries and beyond.

Role of BMUs

The functions of BMUs are clearly set out in the 2003 Statutory Instrument. In terms of planning, BMUs are responsible for developing and implementing local fisheries management and beach development plans within their area of jurisdiction. BMUs should:

- Lobby for the integration of LKMP and BMU plans into parish development plans.
- Collaborate with local government partners in the collection, use and dissemination of fisheries and environmental information for the improved management of resources.
- Agree on, and lobby the Sub-County for adoption of, by-laws for improved fisheries management.
- Participate in monitoring, control and surveillance activities.

BMUs are the foundation of LAKIMO and integrated lake management depends upon the capacity and willingness of BMU members to work towards improved livelihoods through sustainable natural resource management.

Figure 5.1 The Structure of LAKIMO

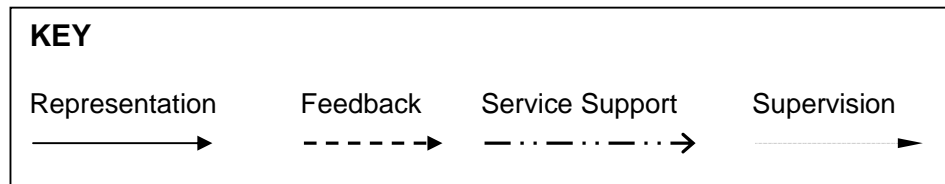
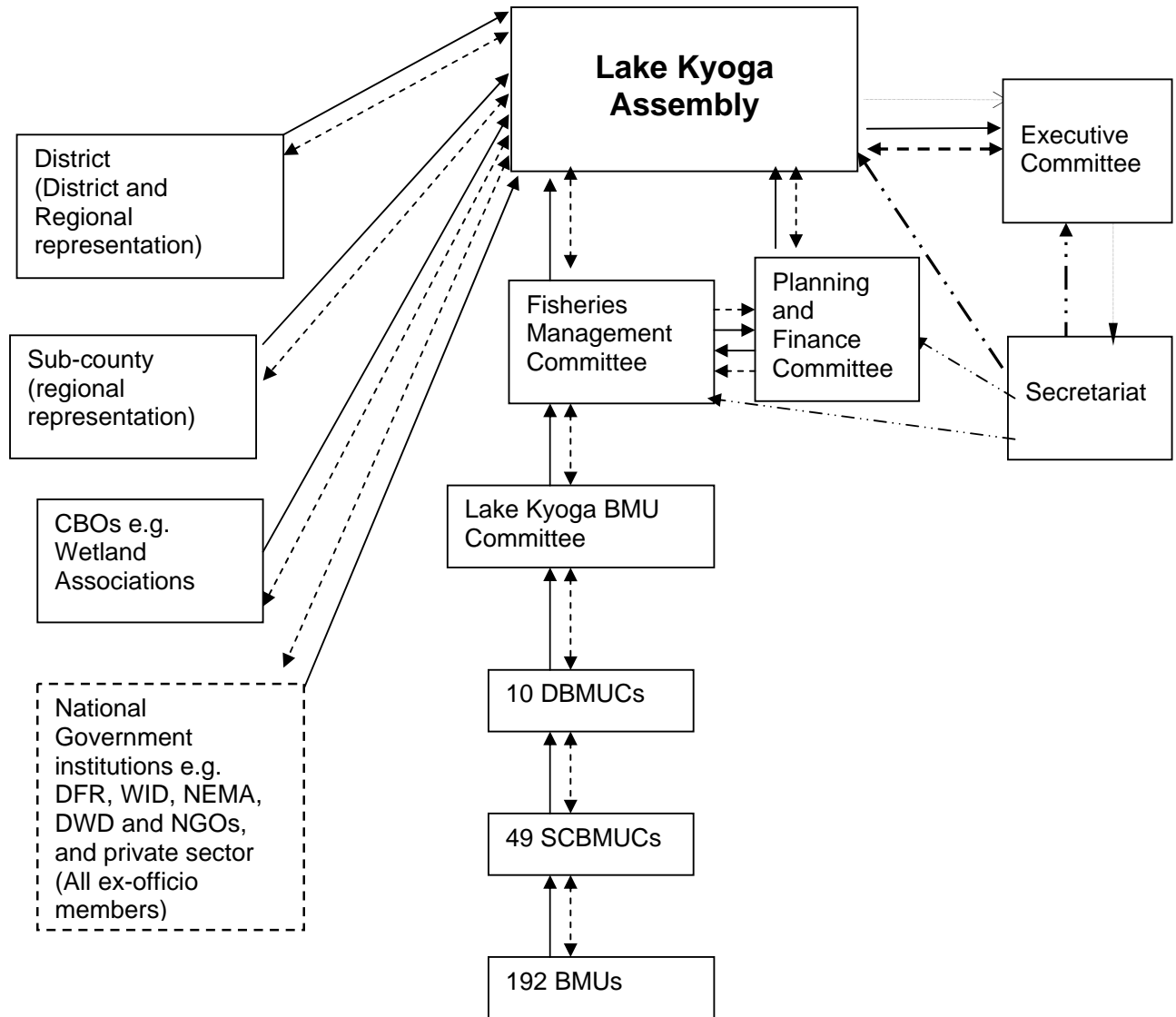
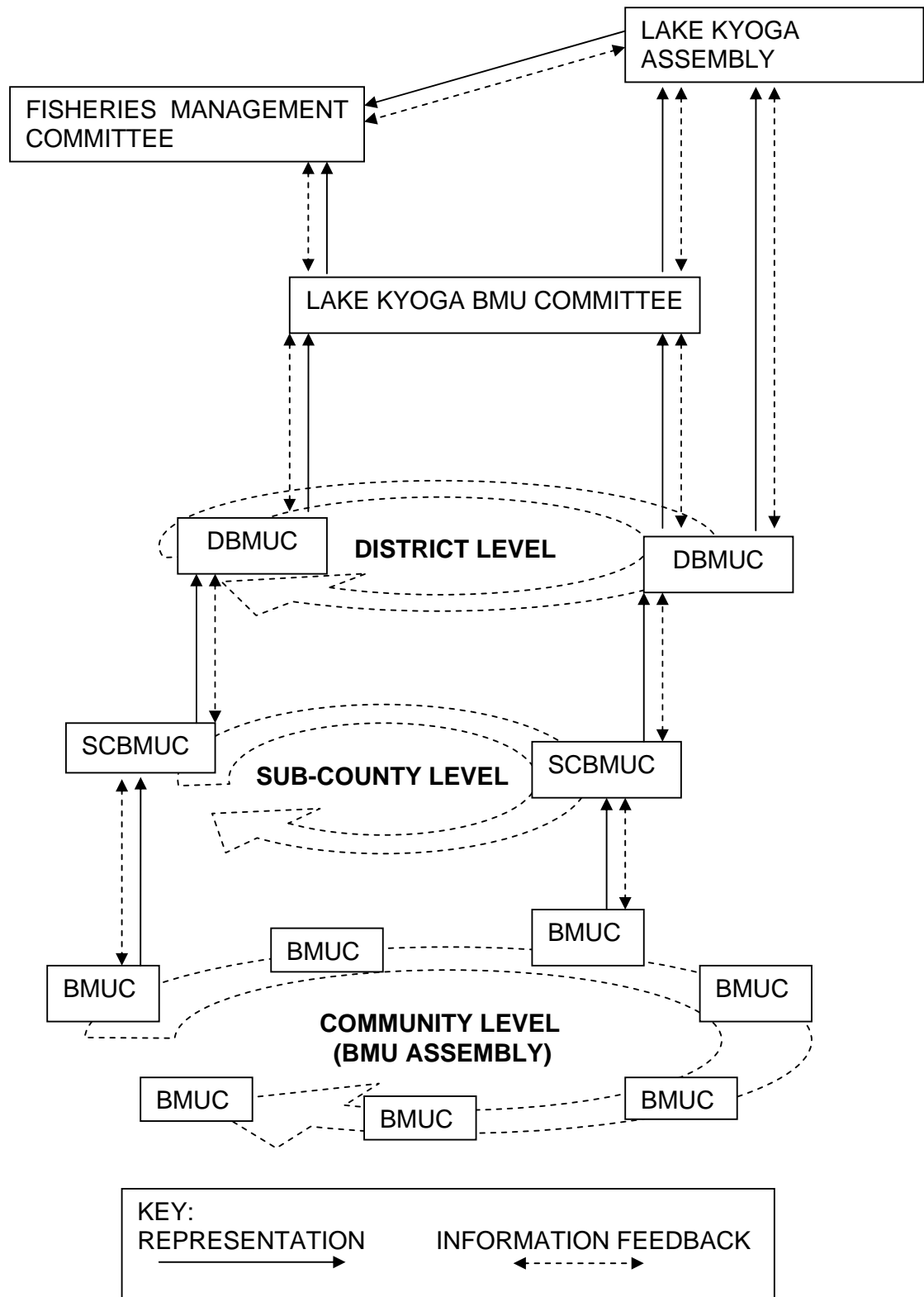


Figure 5.2 BMU Associations within LAKIMO



5.3 The Objectives of LAKIMO

The objectives of LAKIMO, as set out in the Constitution, are to:

- (i) Contribute to poverty eradication and the social and economic development of the Lake Kyoga communities through the integrated and sustainable management of the Lake Kyoga natural resources;
- (ii) Ensure collection, exchange and use of information in order to improve the management and sustainable use of the Lake Kyoga natural resources;
- (iii) Increase security of access to, and benefits from, Lake Kyoga natural resources for dependent local communities, especially for the poor and marginalised sections of society in these communities;
- (iv) Promote alliances in the management of the Lake Kyoga natural resources by encouraging operational, economic and other partnerships among the respective central government agencies, the co-operating local governments, private sector, local communities and civil society Organisations;
- (v) Develop a framework in which local communities, including poor marginalised stakeholders, can effectively participate in the management and sustainable use of the Lake Kyoga natural resources;
- (vi) Establish and manage funding mechanisms and financial resources for the sustainable management of Lake Kyoga natural resources including the establishment of trust funds, endowments or any other funding mechanism as may from time to time, by resolution, be determined by the Lake Kyoga Assembly;
- (vii) Ensure effective and coordinated implementation of all agreed management plans of the Organisation;
- (viii) Monitor and evaluate progress and performance of implementing all agreed management plans undertaken by or through the Organisation;
- (ix) Promote compliance with the requirements of relevant national policies, plans and legislation and promote the implementation of international obligations imposed by international conventions or treaties to which Uganda is a party.

6. CHALLENGES AND OPPORTUNITIES

6.1 Introduction

This chapter sets out the key challenges and development opportunities under thematic headings. The themes were identified through workshops and meetings, with consultation at national, district and sub-county levels, and are:

- Effective institutions for lake management
- Information for planning, management and development
- Delivery of, and access to, services
- Fisheries operating sustainably and equitably accessed
- Environment and natural resources management

6.2 Effective Institutions for Lake Management

The institutions for lake management, at lake wide, district, sub-county and BMU level, are in place. The co-operating local governments are functioning at all levels and central government is supportive of lake wide integrated management, as shown in the 2004 National Fisheries Policy and the new draft Fisheries Bill. Co-operating districts have demonstrated that they are able and willing to work together in the formation of LAKIMO and now, in the development and implementation of the LKMP. The supportive structures and systems will help to ensure that the institutions of LAKIMO operate effectively.

The institutions have a legal mandate through the BMU Statute (which allows for BMU association in Part X, article 24) and through the Local Government Act 1997 (Section 9). This legal mandate enables LAKIMO to carry out its work and be effective across the lake, at all levels.

In addition, LAKIMO has benefited from the experience of the Lake George Basin Integrated Management Organisation (LAGBIMO), formed on Lake George, in the southwest of Uganda, in April 2003. Much has been learnt in terms of institutional development and operation, and much can still be learnt, and shared, between the two organizations.

There are, however, threats to the effective operation of the institutions. These include too few staff in local government, particularly in key departments, such as the District Planning Unit, the departure of ILM in October 2004, leaving insecurity in terms of external funding and technical assistance, and insecurity in some districts. The insecurity largely arises from the Lord's Resistance Army (LRA), which is still active and causing destruction and great loss of life in some of the districts around Lake Kyoga. The Karamajong, however, have also caused some disturbance in the eastern area of the lake.

LAKIMO must constantly share information on security between members, and be aware of security issues in the planning and implementation of LAKIMO activities.

The challenges, then, that face LAKIMO in ensuring that the institutions created are strong and effective include:

- The capacity of stakeholders is lacking in some activity areas and requires support to increase capacity, e.g. in participatory planning and monitoring and evaluation.
- Some institutional structures within local government lack capacity and resources. Most notably for integrated lake management, the environmental management capacity of local government and communities is often inadequate. District and local environment committees rarely meet and do not have sufficient resources and power to ensure that timely decisions are made and implemented.
- Districts, particularly those very affected by LRA activities, find it difficult to raise local revenue that could be used to support lake management activities.

There are, however, many opportunities to support the improved capacity and operations of LAKIMO institutions, including:

- The existence of technical assistance in some districts in a range of areas, including financial management and administration.
- The draft revised Poverty Eradication Action Plan (PEAP) contains reference to lake management organisations and plans, and the need to build the capacity of such organisations, as well as BMUs.
- Local governments have capacity building plans, which could include capacity needs for LAKIMO structures and of members.
- There are development partners in Uganda who are interested in poverty reduction through improved natural resource management.

LAKIMO members and committees must ensure that such opportunities are tapped into to strengthen the institutional structures and, hence, the implementation of this plan for improved livelihoods.

6.3 Information for Planning, Management and Development

Information is critical for effective planning, management and development. All co-operating district local governments have a Planning Unit, which oversees all planning activities within the district.

The level of information collection, analysis and use differs around the lake, due to differences in resources available to collect information and capacity to use the information in decision-making. Many challenges are faced in terms of generating, analysing and using information, including:

- There is not enough systematic information collection at BMU level. Although fisheries information collection is now beginning, most communities do not collect socio-economic or environmental information.
- Information is not always effectively disseminated, managed and shared.

- There is a lack of capacity to analyse and use information.
- Many information collection initiatives are driven by national government or external agencies, rather than by local government.
- The information that is generated cannot always be relied upon due to inadequate capacity in collecting data.

Although many challenges remain, there are numerous opportunities to improve information collection, analysis and use. As noted, the collection of fisheries information is just beginning in a systematic way around Lake Kyoga, guided by training provided by the Department of Fisheries Resources. The FMC will play an important role in overseeing the collection, analysis and use of such information, and will support BMUs, through the DBMUCs and SCBMUCs.

Other opportunities to develop and strengthen information management systems is in local government and BMUs sharing information and experiences and learning with, and from, each other. Such opportunities include:

- The roll out of the Local Government Information Communication System (LOGICS) in, principally, Soroti and Lira, with other districts beginning to take up the system.
- Information collection, particularly for monitoring and evaluation (M&E), is being supported by different grants and programmes implemented through local government, such as the Poverty Action Fund (PAF), the National Agricultural Advisory Services (NAADS) and the Local Government Development Programme (LGDPII). There is a need for improved co-ordination to use resources effectively and to share information.
- New initiatives at national level that some districts are involved with will strengthen existing systems. LAKIMO provides a forum for sharing knowledge, information and experience between districts. These new initiatives include the development of Uganda Info and the National Integrated Monitoring and Evaluation Strategy (NIMES). The work of the newly formed National Planning Authority should also assist the planning and information management systems of LAKIMO.

In addition to information generation, analysis and use, local governments are striving to improve their planning systems and approaches. Recent guidance from the Ministry of Local Government, in the form of the Harmonised Participatory Planning Guide (HPPG), should mean that planning at Parish and Sub-County levels is informed by community preferences and their vision for the future, and lead to achievable goals and objectives. LAKIMO provides a forum for members to share their experiences from the use of HPPG and to encourage BMU participation in the drafting of Parish Development Plans.

The 2003 BMU Statute requires that BMUs produce beach development and fisheries management plans and it is envisaged that, within LAKIMO, districts will produce fisheries management plans. The development of these plans will require support and guidance in terms of format, advocacy and integration into

local government development plans. This will require Fisheries Officers to support BMUs and work with the District Planning Units in integrating BMU priorities in development plans.

6.4 Delivery of, and Access to, Services

In August 2003, ILM conducted a survey in four of the ten districts (Lira, Nakasongola, Soroti and Kamuli) to find out more about the livelihoods of the fishing communities (ILM, 2003).

In terms of livelihoods, the study found that nearly 80% of BMU households are dependent on the fishery as their first source of income. There is little variation in sources of income during the year, and the vast majority of income generating activities are carried out at the landing site, or very near it.

Fish landing sites are well known for the poor provision of services and infrastructure. There are several reasons for this poor provision, including:

- The sites are often very far from district headquarters and are far from main roads, making access difficult.
- Funds within local government are lacking and the landing sites may not always be prioritised, and needs not understood.
- Some areas near the lakeshore are difficult to build on and to dig pit latrines because of loose soil. This makes latrine and water coverage more expensive. As many BMUs have people with different cultures, the provision and maintenance of hygiene facilities is more challenging.

Table 6.1 provides a summary of facilities available at the surveyed landing sites. The figures confirm the inadequate provision of services and facilities at landing sites. None of the landing sites have electricity, for example, and only 7 of the 25 are accessed by an all weather road, affecting not only the delivery of services, but also access to markets, schools and health services.

Table 6.1 General Information on Landing Site facilities

District	Kamuli	Lira	Nakasongola	Soroti
No. sites	5	6	7	7
Fish Shed	0	0	1	1
Cold Room	0	0	0	0
Cold Storage	3	1	3	5
Jetty	0	0	0	0
Electricity	0	0	0	0
Av elec. km	3	1.3	2.7	1.7
Fish Store	2	0	0	0
Public latrine	2	2	4	4
Public toilet	0	0	0	0
Net repairer	0	1	0	4
Boat repairer	1	1	1	2
Good road	4	0	1	2
Potable water	0	0	4	0

The livelihoods study also found that 14% of households interviewed save money, with 31% of those saving every week, 46% every month and 23% less frequently. Saving money contributes to reducing vulnerability and increasing the ability of a household to take up new opportunities to invest in existing businesses or start new initiatives. The main reasons for not saving money are given in Table 6.2.

Table 6.2 Reasons for not saving

Main reason for not saving	Percentage
No money to save	72
Too far to savings organisation	19
Do not want to save money	3
Other	6

Other reasons for not saving include:

- Needing to have money at hand in case of emergencies
- Lack of awareness about how to open an account
- The available bank was not considered reliable

These reasons indicate that, although lack of funds was most frequently cited as the main reason for not saving, raising awareness about the benefits of saving and of how to save, as well as improving access could all help increase the number of households saving money and the frequency of, and amount, saved. Facilities for saving small amounts would also help, as money is earned on a daily basis, rather than as a weekly or monthly salary.

Service delivery and access to services came out strongly as priorities identified by BMUs to feed into this plan. The top six priorities from all of the responses are shown in Table 6.3.

Table 6.3 BMU service related priorities

Service related priority	Percentage of BMUs that listed concern
Construction of latrines	60%
Provision of clean drinking water	43%
Construction of road to landing site	36%
Provision of fish handling facilities	19%
Construction of a health unit	11%
Provision of transport across the lake	9%

Other infrastructure needs were identified by a few BMUs, though no BMU identified the provision of electricity as a priority and only one BMU identified awareness raising about HIV/AIDS as a priority. A recent study on HIV/AIDS in fishing communities concluded that such communities are particularly susceptible to HIV/AIDS due to:

- Near neglect by government and the service sector.

- High degree of mobility by fisherfolk.
- Lack of social cohesion (Bishop-Sambrook and Tanzarn, 2003).

A further study is planned by the Department of Fisheries Resources to generate further understanding and to support the Department in developing a proposal to seek support in delivering HIV/AIDS interventions specifically for fisheries communities.

There are, then, numerous challenges in the area of provision of, and access to, services, with most, if not all, services needing to be improved. Opportunities do exist for local governments, BMUs and LAKIMO to tap into technical assistance and funds to improve the delivery of, and access to, services. These include:

- Improved planning capacity, so that needs are documented and understood.
- Development partners and government initiatives exist to support service delivery.

Service provision for BMUs is particularly needed for those BMUs that formed as a result of people relocating from the floating papyrus islands – the sudd, and those BMUs to which people relocated. Three BMUs were formed in Apac and two in Nakasongola, and, in Lira, people mainly relocated to three existing BMUs. The relocation of sudd inhabitants resulted from a process of local and central government working with the communities to encourage relocation due to the unsanitary conditions on the sudd, which posed hazards for human health as well as for fish handling, which meant that the communities could not form BMUs on the sudd and, consequently, could not carry on with commercial fishing activities. Improved services are urgently needed for the new and expanded BMUs resulting from the relocation of sudd inhabitants.

Three BMUs on Lake Kyoga will benefit from the Fisheries Development Project, funded by the African Development Bank (ADB), which will upgrade the beneficiary landing sites, improving their fish handling facilities as well as addressing issues of sanitation. The modernization of landing sites is planned for Kagwara (Soroti), Lwampanga (Nakasongola), Namasale (in Lira) and Kayeyi (in Apac).

6.5 Fisheries Sustainability and Access

The LAKIMO Fisheries Management Committee has developed a Fisheries Management Strategy (FMS). The FMS is embedded within all outputs of the LKMP.

The sustainable operation of fisheries is essential for securing the livelihoods of the lake dependent communities. Not only must they operate in a sustainable manner but they must be accessed in a fair and transparent manner by poor people if the FMS is to have a positive impact in reducing poverty. The aim of this output is to increase fisheries productivity and ensure an equitable share of the benefits from the fishery, especially to poor people in

lake dependent communities. Action is needed in a range of areas, including drafting, approving and implementing fisheries bye-laws, establishing community based monitoring, control and surveillance units to reduce illegal fishing and fish trading, and the introduction of controlled access and limits to numbers of natural resource users by new participatory licensing procedures

The two most often cited fisheries management priorities from the BMU consultations were:

- Eradication of fishing malpractices (e.g. conducting patrols to enforce fisheries regulations, stopping fish buying on the lake;) (22% of BMUs);
- Provision of fishing gears (17% of BMUs).

Other priorities identified included destroying suddes that carry away nets (though noting that suddes act as a sanctuary for some species and should not be destroyed) and revenue collection from the fisheries to support local management.

To address these issues, the Lake Kyoga Fisheries Management Strategy incorporates a set of operating regulations introduced by DFR under the Fish Act 1964 and is in the process of developing local ordinances and bye-laws to supplement these national regulations. Many of the existing fisheries regulations that apply to Kyoga, are designed to regulate the size or age at which fish are captured. The regulations have been designed to protect the two largest and most commercially important species, Nile perch and Nile tilapia by preventing the capture of immature individuals.

Kyoga faces the dilemma of most other tropical, multi-species fisheries where there is a range of different fish species of varying sizes in the commercial catch. The dilemma is that for a particular gear type, say a gill net, protection of the larger species, usually means that users must forgo the chances to exploit the smaller, less commercially important species. Examples of this are found on Kyoga where smaller species such as Schilbe, Mormyrus, Synodontis cannot be captured in gill nets of the minimum legal mesh size of 5 inches. Under present management conditions, there is no easy solution to this problem.

The FMS also aims at preventing the use of indiscriminate fishing methods that kill all types and ages of fish. These include the use of poisons, electricity and explosives. Particular vigilance is needed to prevent the use of poisons since it is this that could lead to the closure of Nile perch export market, with disastrous consequences for Uganda.

The national regulations do not attempt to regulate fishing effort, apart from requiring fishing vessel owners to purchase a fishing vessel licence and for fishing crew to purchase a fishing permit. The FMS, in accordance with National Fisheries Policy, aims to move towards controlled access to fisheries through BMUs and local governments. There are plans to learn from the experience on lakes George and Edward and to introduce a limit to the number of fishing vessel licences and fishing permits to be issued on Lake

Kyoga. A participatory selection procedure will be developed to control access through licensing.

In addition to national regulations, the FMS includes proposals for a district fisheries ordinance to be agreed by all users and approved by ten district councils. The proposed ordinance includes the establishment of a prohibited fishing zone applied to the use of gill nets along the whole shoreline of the lake. This is the breeding and nursery area of Nile tilapia. It is also designed to limit fishing effort by restricting fishing times and to reduce environmental hazards relating to fisheries.

The establishment of three regional LAKIMO MCS Units is a cornerstone of the FMS. The units operate using agreed standard procedures that comply with national guidelines and issued by the LAKIMO FMC. The units will pay particular attention to operate in a fair, legal, transparent and accountable manner. This is crucially important given the poor record of previous and on-going patrols by external enforcement agencies. Each unit has standard reporting procedures used by each MCS regional coordinator. Reports are submitted on a monthly basis to the FMC for synthesis.

6.6 Sustainable Management of Environment & Natural Resources

Lake Kyoga is a complex system, with diverse and important ecological features. The wetlands, in particular, are a crucial part of the system and their management is a significant challenge for LAKIMO, to reduce encroachment into, and conversion of, wetlands. Whilst there is legislation in place to protect environment and natural resources (ENR) and requirements for environmental impact assessments, this legislation is not always enforced, due to lack of capacity and commitment to environmental protection.

In reviewing the ENR challenges and opportunities, it was found that the capacity to manage ENR is limited at all levels, from the community to district. Although there is guidance in place for local government, capacity building is needed to support implementation and integration of environmental action plans, or ENR priorities, in development planning.

LAKIMO presents an opportunity for districts to learn from each other in terms of capacity for environmental management, technical responses to environmental challenges (such as wise use of wetlands) and use of tools for environmental assessment and management. Stakeholders should share lessons and experiences to enable more effective management of environmental resources.

Annex 2 sets out details of key legislation for environmental management that LAKIMO must be aware of, and comply with. The National Environment Act (1995) requires that local government produces environmental action plans (EAPs) at district, sub-county and parish levels. Not all districts have produced such plans and, where they have been produced, it has not been easy for local governments to ensure full integration of EAPs into development plans.

Such integration is essential for implementation and in ensuring funds are allocated.

Annex 2 also sets out details of support being provided to four districts within the Lake Kyoga region under the World Bank funded Environment Management Capacity Building Programme (II), implemented through the National Environment Management Authority (NEMA). These districts are Pallisa, Lira, Kamuli and Kumi. In addition, some other districts have received support from donors and NEMA in developing EAPs and in building capacity in environmental planning and management.

Annex 3 sets out synthesis tables for environmental priorities identified from District Environmental Action Plans (DEAPs), Sub-County Environmental Action Plans (SEAPs) and Parish Environmental Action Plans (PEAPs) for Lira, Kumi, Nakasongola, Kamuli and Katakwi. SEAPs and DEAPs are themselves a synthesis of PEAPs, so, where a DEAP has been completed, this was used to produce the synthesis table. In districts where the DEAP has not been completed, the SEAPs or PEAPs were used.

Some of the priority challenges set out in the tables are addressed in sections in this chapter. These include:

- Lack of capacity for environmental planning and management (Section 6.2).
- Lack of environmental information and the need to develop environmental information management systems (Section 6.3).
- Poor sanitation facilities and inadequate provision of clean drinking water at landing sites (Section 6.4).
- Unsustainable fishing and inappropriate fishing methods (Section 6.5).

The priority challenges of most relevance to this section are:

- Gulleys at landing sites
- Cultivation of lake shores
- Lake pollution
- Deforestation
- Soil erosion
- Wetland degradation

In addition to these locally identified environmental challenges, there is the significant challenge of the blockage of the exit of the lake by floating papyrus, that is, sudd. Removal of this sudd blockage has begun, using equipment donated by the Government of Egypt, but the use of the largest dredger is awaiting the results of an Environmental Impact Assessment (EIA) to ensure that the operation of such equipment is done in a way that negative environmental impacts are minimised.

NEMA, in conjunction with the Department of Fisheries Resources and the Directorate of Water Development, are in the process of overseeing this EIA.

The environmental implications of this exercise could include negative impacts on fisheries habitats, water retention within Lake Kyoga and other socio-economic implications, so it is critical that mitigation measures are identified and implemented.

NEMA is very active within the Lake Kyoga region in building capacity for environmental management and these provide opportunities for lesson-learning and sharing information and experience between stakeholders. Examples of NEMA's activities include:

- (i) Co-coordinating the mobilization of community efforts towards restoration of degraded river banks along the Nile starting from Jinja (Buwenda), Njeru and Wakisi Sub-county in Mukono district, in Kamuli District (Kisozi sub-county) in Kayunga District at Nazigo and Kangulumira. Considering that one of the main environmental problems affecting the Lake Kyoga ecosystem is siltation, these upstream restoration efforts are contributing towards alleviating and reducing the silt loading into Lake Kyoga using the ecosystem management approach.
- (ii) In Kapchorwa (River Ngenge and River Atari), which are catchments of Lake Kyoga, NEMA is working with communities for improved management of the river banks so that soil erosion and subsequent silt loading into water bodies is controlled. Significant progress has been made in mobilising community action and the Lake Kyoga ecosystem will be better protected when upstream sources of silt load have been controlled.
- (iii) NEMA has also stopped people from ferrying stones and sand bags for anchoring of the floating suddes. The settlers had adopted this idea in order to anchor suddes with a view of subsequently "owning" them as permanent settlers. This was contrary to the Regulations and the National Environment Act which prohibit individual ownership of "territories" within water bodies.
- (iv) NEMA's efforts in resettling pastoralists outside wetlands in Kumi and Soroti districts (Gweri and Agu wetlands) have significant implications to the Lake Kyoga ecosystem. A cabinet paper has been prepared and contains proposals on how to comprehensively handle this matter.

A new regional initiative with significance to the Lake Kyoga system is the Nile Basin Initiative (NBI), which is finalising the recruitment of a National Programme Co-ordinator (NPC) for the Environmental component. The recruitment of the NPC will pave the way for implementation of activities for the sustainable utilisation and conservation of the riparian resources. It is expected that stakeholders involved in activities relevant to the Nile basin (that shall of necessity include those involved in the Lake Kyoga system) shall be involved in the further development of activities. These activities are expected to include those for protection of the Nile waters from siltation, wetlands conservation and pollution control in general.

The Wetlands Inspection Division (WID) is also very active within the Kyoga system. The activities of WID are guided by the Wetlands Sector Strategic Plan (WSSP) of 2001, which built on the 1994 National Wetlands Policy. Uganda has about 30,000 square kilometres of wetlands, or about 13% of the total area of the country. Wetlands include areas of seasonally flooded grassland, swamp forest, permanently flooded papyrus and grass swamp, and upland bog.

Wetlands serve both ecological and livelihood functions, including:

- Maintenance of the water table.
- Maintaining water quality by filtering pollutants and sediments.
- Flood control (slowing down water flow: slow flooding is beneficial for grazing animals and agriculture during dry season).
- Provision of habitats for plants and animals
- Provision of goods for livelihoods, including fish, fuel wood, building poles, thatch, water and pasture.

The wetlands across Uganda are steadily being encroached and converted for, largely, agricultural purposes in rural areas and for construction in urban areas. The National Environment Wetlands, River Banks and Lakeshores Management Regulations (2000) provide the most important management legislation for wetlands in Uganda. Table 6.4 shows the area of wetlands and of converted wetlands within the co-operating districts and Table 6.5 provides the names of the wetland systems in each district. This information has been taken from Wetland Inventory Reports produced for each district, which sets out information about all the wetlands in a district and is used as a baseline for management activities.

There is an urgent need for improved management of wetlands and WID is promoting this through the formation of community-based wetland user associations and the development and implementation of wetland action plans at community, sub-county and district levels.

Kumi District has five wetland user associations, some formed as early as 1999. The members include rice farmers, cattle grazers, water collectors, fisherfolk, craftsmen and community leaders. Two of the associations have action plans (Orido and Muda), including activities for raising awareness, demarcating wetlands, protecting spring wells, wetland enrichment planting and regulating fishing.

The key challenges for wetland management include:

- Awareness raising at all levels to increase the awareness of communities and local government about the value and functions of wetlands, legislation and the sector plan, and the need for action plans.
- Enforcement of existing legislation.
- Support to communities and local government in producing and implementing wetland action plans.
- Preparation of wetland ordinances.

- Boundaries around wetlands need to be more firmly determined. This would require training for District Land Board members in how to determine wetland boundaries. District Wetland or Environment Officers can provide guidance on wetland boundaries.

Addressing these challenges should lead to better monitoring of conversion of wetlands, improved management and reduction in encroachment and conversion, particularly in areas where wetlands have already been significantly encroached. Seasonal wetlands have attracted more encroachment than permanent wetlands, which are more difficult to drain. Rice cultivation is increasing in seasonal wetlands in many of the districts and investigation into this increasing cultivation in terms of its impacts on wetlands is needed.

The opportunities for improving the management of wetlands include:

- The Wetland Sector Strategic Plan, which has technical assistance and funding for district and community activities.
- Some districts and communities have started to draft wetland action plans. LAKIMO offers a mechanism through which districts and communities can share and learn from each other, including in the drafting and content of such plans.
- Wetlands ordinances exist in some districts (outside the co-operating districts), from which LAKIMO districts can learn.

There are, then, many environmental and wetland management challenges, but the opportunities for improving management also exist. The key to taking these opportunities is to increase awareness of, and commitment to, the challenges and increasing capacity to take appropriate actions.

Table 6.4 Total wetland area (km²) and area converted per district (1992 data)

DISTRICT	TOTAL AREA OF DISTRICT (km ²)	TOTAL DISTRICT WETLAND AREA (km ²)	AREA CONVERTED PER DISTRICT (km ²)	ORIGINAL WETLAND AREA IN DISTRICT (km ²)	CONVERTED AS % TOTAL ORIGINAL WETLAND AREA	WETLAND AS % OF TOTAL DISTRICT AREA
Luwero/Nakasongola	9,204	2,422	28	2,445	1.1	26.3
Mukono/Kayunga	14,309	987	109	1,096	10.0	6.9
Kamuli	4,302	1,080	316	1,396	22.6	25.1
Kumi	2,848	989	61	1,050	5.8	34.7
Pallisa	1,992	711	258	969	26.6	35.7
Soroti/Katakwi	10,016	3,206	9	3,215	0.3	32.0
Apac	6,541	1,147	13	1,161	1.2	17.5
Lira	7,201	1,091	37	1,128	3.3	15.2

Note: The satellite imagery was carried out prior to border changes within local government. At the time the images were taken, Kayunga was part of Mukono, Luwero and Nakasongola was one district and Kaberamaido did not exist.

Table 6.5 Description of wetland systems

District	Wetland system
Nakasongola	Sezibwa, Mukote, Mukana, Ndala, L. Kyoga, Saba
Kayunga	Sezibwa
Kamuli	L. Kyoga, Mpologoma, Nabigaga, Nawampasa
Kumi	L. Bisina, L. Adois, L. Ajami-Kasago, L. Nyaguo, L. Kodike, L. Olupe-Okiokot-Komasingo
Pallisa	L. Kyoga, Lwere, Mpologoma, Namatala
Soroti/Kaberamaido	Kapujan-Awoja, Ojago, Abalang, Oliani, L. Kyoga
Katakwi	Oliani-Omungal, Obwin, Kirik-Angoleto, Apenduru-Otuko, Bisina, Ngariam-Magoro
Apac	L. Kwania
Lira	Olweny, Okole, Okei, L. Kwania/Kyoga

7. ACTION PLANNING

7.1 Introduction

This chapter describes outputs expected to be achieved through the implementation of this plan, with associated action plans. The outputs were identified through analysis of the challenges set out in Chapter 6. In each of the action plans, targets, action areas and lead implementers have been identified, as well as indicative costs and time frame.

7.2 LKMP Logical Framework

The outputs and targets are set within the context of a logical framework (logframe) in Annex 1 of this plan. Each output has 'objectively verifiable indicators' (OVIs), against which progress towards each output can be assessed. To facilitate the implementation of the plan, each OVI is interpreted into a target, against which action areas have been identified in the following tables. These action areas will guide the more detailed work planning and budgeting of each LAKIMO committee and Secretariat.

In addition to the OVIs, each output in the logframe has 'means of verification' (MOVs), which indicate where information can be found to verify the progress made against each output. There are then assumptions, which set out the broader factors that may influence whether the outputs are achieved, and to what extent.

Achieving the outputs is necessary for achieving the purpose of the LKMP and the goal. The purpose also has OVIs and MOVs, which indicate in more detail how the purpose should be met.

7.3 Outputs

The wording of the outputs are a result of the discussion of the strengths, challenges and opportunities in Chapter 6 within each thematic area. The output sets out what is to be achieved, to enable the purpose and goal of the plan to be reached.

Output 1: *Management institutions with improved capacities and operating effectively*

LAKIMO structures are in place but require support (technical assistance and funding) to ensure they operate effectively. The performance of the structures should be monitored regularly so that weaknesses or problem areas are identified as soon as possible and appropriate action taken. The development and implementation of the capacity building plan is essential for the effective operation of LAKIMO structures at all levels.

Output 2: *Information for planning, management and development available and used*

There are many demands for information and opportunities for improving the generation, dissemination and use of information. LAKIMO will need an

information management strategy to ensure coordination of activities and effective and efficient generation and use of information. LAKIMO must maintain awareness of local and central government initiatives in this area and ensure that its systems build on, and fit with, these for ease of information generation and use. LAKIMO can provide districts and communities with the opportunity for lesson learning and sharing information for lake wide management.

Initiatives in the generation of information for fisheries management have already started in terms of building the capacity of BMUs to collect, analyse and use fisheries information and establishing a Fisheries Research Unit to generate information and better understanding for key fisheries management questions.

Implementing the LKMP will also require the development and implementation of a Fisheries Management Strategy, setting out more details about the efforts to improve the productivity of the fishery, district fisheries management plans and BMU plans. BMUs are required to produce beach development and fisheries management plans, though these may be brought together into one plan, which will form the basis of BMU activities and will enable BMUs to participate effectively in the development of Parish and Sub-county development plans.

Output 3: *Delivery of, and access to, services improved*

Improving service delivery, and access to services, is critical for improving livelihoods within the BMUs. Service delivery in the areas of drinking water, sanitation, road and water transport, fisheries infrastructure, savings schemes, health and HIV/AIDS and education (children and adults) must be improved. Opportunities exist in many of these areas for assistance in terms of technical support and funding.

Output 4: *Fisheries operating sustainably and equitably accessed*

Improving fisheries management is key to improving the livelihoods of the lake dependent communities by increasing productivity and ensuring an equitable share of the benefits from the fishery. Action is needed in a range of areas, including drafting, approving and implementing fisheries bye-laws, establishing community based monitoring, control and surveillance units to reduce illegal fishing and fish trading, and the introduction of controlled access and limits to numbers of natural resource users by new participatory licensing procedures.

Output 5: *Environment and natural resources sustainably managed*

Many environmental challenges were identified in Chapter 6, some of which are covered in other outputs (such as building capacity for environmental management). The integration of environmental action plans into development plans, and the development and integration into development plans of wetland action plans are key challenges for local governments. Guidance is needed from national government in how to effectively integrate such plans into development plans, so that activities attract funds and are implemented.

Greater enforcement of existing legislation is needed, though ordinances and bye-laws are needed in some areas.

7.4 Action Plans

Tables 7.1 to 7.5 set out the action areas for each target in the logical framework. Action areas, rather than activities, have been identified, as the actual activities will be extensive and require detailed work plans. These work plans will be developed by the committees of LAKIMO, to oversee the implementation of the plan, on an annual and quarterly basis. The work plans will then be costed, using the indicative costs as a guide. An overall summary of costs of plan implementation is given in Table 7.6.

More detailed costing will also be carried out for local government development plans and in developing proposals for seeking funding from development partners and government programmes.

The time frame for the implementation of the plan is 2004-2007. There are, however, some activities that have higher priority than others. Output 1, for example, will require attention to ensure that the structures of LAKIMO are working well and that at least some capacity building has been provided so that any further funds received are used effectively and appropriately.

Where systems and structures are in place, implementation is likely to be faster, for example in the area of fisheries information collection, where support has started in getting the systems working, whereas very few parishes or village collect socio-economic information. Implementation of particular components is also likely to differ around the lake due to differences in priority, capacity and resources. Some government and donor supported programmes are only implemented in certain districts, so it may be that different parts of LAKIMO may get different sources of funding for the same activities.

Table 7.1 Output 1: Management institutions with improved capacities and operating effectively

Targets	Action areas	LAKIMO lead, with support	Indicative costs	Explanation	Timeframe
1.1 All LAKIMO structures performing at least satisfactory	<ul style="list-style-type: none"> • LAKIMO structures operating: <ul style="list-style-type: none"> - Secretariat - LKA - EC meetings - PFC meetings - FMC meetings - DBMUCs - SCBMUs • Develop and implement a LAKIMO performance monitoring system • Act on results of monitoring 	LAKIMO Secretariat and EC	Yr1 84M Yr2 96M Yr3 108M 25M/year 20M/year 16M/year 16M/year 12M/year 12M/year	Secretariat costs include salaries, office and vehicle running costs Meeting once a year 4 meetings a year 4 meetings a year 4 meetings a year 4 x 10 x 10 x 30,000 4 x 49 x 10 x 6,000 Within Secretariat and meeting costs	Quarterly 2004-2007
1.2 50% of BMUs performing at least satisfactorily	<ul style="list-style-type: none"> • Annual implementation of BMU performance monitoring • Lake wide analysis and use results 	DFR; FMC, through DBMUCs & SCBMUCs FMC and EC	8.5M a year = 25.5M	Allowances and transport 1 day per BMU + 1 day Audit @ 22,000 each day	Annual (performance and audit) 2004-2007
1.3 Sustainable funding for BMUs and LAKIMO	<ul style="list-style-type: none"> • Awareness raising for landing site user fee • Local governments and BMUs make payments to LAKIMO • Additional sources of funds sought 	EC EC	4.25M 0.5M a year = 1.5M	1 day per BMU @ 22,000 = Chasing payments (communication, etc.)	2004-2005 2004-2007 (annual)
1.4 Capacity building plan developed and implemented	<ul style="list-style-type: none"> • Develop capacity building plan • Implement plan through LAKIMO resources, integrating into local government development plans and 	PFC and FMC EC	- 150M/ course = 600M over 3 years	Within meetings costs (i) 4 courses over 3 years BMUs (Fisheries mgt and info; bookkeeping; participatory planning,	2004-2007

	<p>promoting to partners</p> <ul style="list-style-type: none"> Support BMUs in registering as NAADS groups to receive support from NAADS 	<p>FMC, Secretariat, NAADS</p>	<p>5M per year = 15M 3M per year = 9M 3M year 1</p> <p>-</p>	<p>representation and advocacy; env. mgt.) (ii) MCS training: 3 MCS units (iii) Research training (iv) Information mgt capacity building for ES Within work plans of DFOs</p>	<p>2004-2007</p> <p>2004-2007 2004-2005</p> <p>2004-2007</p>
<p>1.5 District, Sub-county and local environment committees meet and operate effectively</p>	<ul style="list-style-type: none"> Collect information on environment committees and assess current situation Identify areas of support needed and how to address needs Seek and provide support to environment committees at all levels Promote integration of ENR concerns into DDPs 	<p>PFC and DEOs</p> <p>PFC, DEOs and NEMA PFC, DEOs and NEMA</p> <p>PFC, DEOs and NEMA</p>	<p>0.5M one year 1.5M for years 1 and 2 3x20M = 60M</p>	<p>Within meeting costs</p> <p>Collate information</p> <p>Facilitate support</p> <p>Regional workshops on DDPs and impacts on lake resources</p>	<p>2004-2005</p> <p>2004-2005</p> <p>2004-2006</p> <p>2004-2005</p>

YEAR	YEAR 1	YEAR 2	YEAR 3	TOTAL
TOTAL	381.25M	515.50M	396.00M	1,292.75M

Table 7.2 Output 2: Information for planning, management and development available and used

Targets	Action areas	LAKIMO lead, with support	Indicative costs	Explanation	Timeframe
2.1 LAKIMO institutions using information management and dissemination strategy	<ul style="list-style-type: none"> Review existing information collection and management systems Develop strategy Implement Develop and distribute promotional material for LAKIMO 	PFC, with input from FMC and Secretariat	-	Within operating costs	2004-2005
			15M/year 2.4M/year	Radio programmes Printing newsletter twice a year in 4 languages	2004-2007
2.2 Information system generates data for LAKIMO structures	<ul style="list-style-type: none"> Develop LAKIMO information system (including M&E) Link information system to local government systems, including LOGICS Maintain information system and disseminate information Support collection of socio-economic and environment information by local government and BMUs 	PFC, FMC and Sec PFC and District Planning Units Secretariat, PFC and FMC PFC, FMC and lead agencies	-	Costing included in capacity building for info mgt	2004-2005
			5M/year	Collecting information: allowances, transport, photocopying Included in above	2004-2007 2004-2007
2.3 At least 50% of BMUs produce plans and advocate for their integration into Parish and Sub-county Development Plans	<ul style="list-style-type: none"> Support BMUs in developing plans and advocating for their integration into PDPs and SDPs Advocate for participation of BMUs in planning at lower local government level and use of HPPG in planning at 	FMC and FOs, SCBMUCs, SC Chiefs	3.1M/year	Capacity building costed in Output 1. 1 day visit per BMU by SC Chief @16,000	2004-2007
		PFC, FOs, DPUs	-	DPs to write to SCs Within meeting costs.	2004-2007

	<p>this level</p> <ul style="list-style-type: none"> • Make copies of plans to inform review of LKMP and to lobby for support to BMUs 	Secretariat and FMC	0.5M/year	Obtaining copies and photocopying	2004-2007
2.4 Fisheries Management Strategy developed	<ul style="list-style-type: none"> • FMC to draft and finalise Strategy 	FMC & Sec, D & SCBMUCs, BMUs, DFR	-	Within meeting costs	2004-2005
2.5 District fisheries management plans developed	<ul style="list-style-type: none"> • FMC to provide guidance (format) and support • Fisheries management plans integrated into local government development plans 	FMC, DBMUCs, FOs	-	Within meeting costs	2004-2007
2.6 Fisheries information collated and discussed in all SCBMUC, DBMUC and FMC meetings	<ul style="list-style-type: none"> • FMC and FOs to support BMUs through DBMUCs and SCBMUCs in the collection, analysis and use of fisheries information 	FMC, FOs	7.1M/year	SC and District BMUCs to compile. Quarterly allowance 49 SCs + 10 Ds @30,000	2004-2007
2.7 Fisheries research programme generates information to address key management questions raised in FMS	<ul style="list-style-type: none"> • Design fisheries research programme • Implement and monitor the fisheries research programme • Analyse, disseminate and use information generated from fisheries research 	FMC FMC, FRU and Secretariat FMC and FRU	- 30M/year per unit = 60M/year	Capacity building costed in Output 1 Two research units	2004-2005 2004-2007
2.8 Wetland action plans developed in all districts	<ul style="list-style-type: none"> • Collect and analyse wetland use information • Design and agree wetland action plans (5 per year for 3 yrs) 	DWO, PFC, Secretariat	5M/WAP per year	Costs within National Wetland Programme	2004 - 2005

	<ul style="list-style-type: none"> Disseminate information on WAPs 				
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YEAR	YEAR 1	YEAR 2	YEAR 3	TOTAL
TOTAL	118.1M	118.1M	118.1M	354.30M

Table 7.3 Output 3: Delivery of, and access to, services improved

Targets	Action areas	LAKIMO lead, with support	Indicative costs	Explanation	Timeframe
3.1 At least 50% of BMUs with safe drinking water	<ul style="list-style-type: none"> Support BMUs in advocating for provision of clean drinking water supply to be included in SDP and funded Advocate for support from DWD 	DBMUCs PFC, EC & Secretariat	9SCs x 10M/year 90M 32BMUs x 3M/year = 96M	27 SCs over 3 years with deep well 96 BMUs over 3 years with hand dug well	2004-2007 2004-2007
3.2 At least 25% of lakeside Parishes with a health unit	<ul style="list-style-type: none"> Support BMUs in advocating for provision of a health unit in their Parish to be included in SDP and funded 	DBMUCs	11 Parish x 10M/year = 110M	33 Health Units over 3 years	2004-2007
3.3 At least 80% of children aged between 6-13 enrolled in primary schools	<ul style="list-style-type: none"> Advocate for awareness raising on education and improved access in terms of teachers, class rooms and proximity to schools 	DBMUCs	Yr 1 20M Yr 2 15M Yr 3 10M	Awareness raising and improving access	2004-2007
3.4 At least 50% of households in BMUs with a latrine	<ul style="list-style-type: none"> Support BMUs in advocating for provision of technical assistance for the safe construction of latrines 	DBMUCs PFC and Secretariat	2M/district = 20M Year 1	Awareness raising (e.g. about Ecosan)	2004-2005
3.5 All BMUs with at least one 2 stance public Ecosan	<ul style="list-style-type: none"> Construct and maintain Ecosans 	DBMUC	200,000/ Ecosan 12.8M/year	2 stance Ecosan 64 constructed each year	2004-2007
3.6 Ferry services operating between the south and east and west of the lake	<ul style="list-style-type: none"> Lobby central government for provision of ferry services 	EC	1.5Billion over 2 years	2 ferries purchased and operational	2004-2007
3.7 At least 40% of BMUs with improved fisheries infrastructure	<ul style="list-style-type: none"> Support BMUs in advocating 	FMC, DBMUCs	10M/BMU =	189 BMUs (some covered by ADB);	

	for provision of improved fisheries infrastructure to be included in SDP and funded		630M/year	weighing shade; office; processing slab	
3.8 HIV/AIDS interventions available at all BMUs	<ul style="list-style-type: none"> Lobby for BMUs to be included in district work plans for HIV/AIDS interventions. Support BMUs in being recognised as Community HIV/AIDS Initiative (CHAI) groups to access support and funds. Seek support at national level to address HIV/AIDS within LAKIMO area of operation. 	PFC and EC	600M/3 years	<p>Within work plans of district officers</p> <p>Within work plans of district officers</p> <p>Support direct to LAKIMO for HIV/AIDS interventions</p>	
3.9 At least 50% of BMUs with a trained community health worker	<ul style="list-style-type: none"> Support BMUs in advocating for training for a community health worker 	PFC, DBMUCs	7M/year	Support to BMU community health workers	
3.10 At least 50% of BMUs accessing Functional Adult Literacy (FAL) services	<ul style="list-style-type: none"> Support BMUs in advocating for coverage by FAL services, with a focus on supporting women in participating in adult literacy interventions 	PFC, DBMUCs	-	Advocacy by district officers	
3.11 At least 50% of BMUs have good access to saving schemes for all stakeholder groups	<ul style="list-style-type: none"> Support BMUs in lobbying NGOs and CBOs for access to savings schemes 	PFC, DBMUCs	200,000 per BMU 32 BMUs/yr = 6.4M	Advocacy and support in setting up/awareness raising	
3.12 At least 40% of BMUs have at least some boat crew members using savings facilities	<ul style="list-style-type: none"> Lobby for NGOs and CBOs to raise awareness of boat crew about savings and ensure that boat crew have good access 	PFC, DBMUCs	-	In above costs	
3.13 At least 30% of lakeside SDPs include activities that	<ul style="list-style-type: none"> Support BMUs in identifying non-fisheries income 	FMC, PFC, DBMUCs	-	Within meeting costs and support to BMUs in	

promote non-fisheries income generating activities, with allocated funds	generating activities and advocating for support from relevant agencies			planning	
3.14 At least 20% of BMUs with improved feeder roads	<ul style="list-style-type: none"> Support BMUs in advocating for improved feeder roads to be included in SDP and funded 	FMC, PFC and DBMUCs	138BMUs a year @ 30M = 390M/year	39 BMUs in total	2004-2007

YEAR	YEAR 1	YEAR 2	YEAR 3	TOTAL
TOTAL	2,332.2M	2,307.20M	1,552.20M	6,191.60M

Table 7.4 Output 4: Fisheries production sustainably increased and equitably accessed

Targets	Action areas	LAKIMO lead, with support	Indicative costs	Explanation	Timeframe
4.1 Annual total fish catch of Lake Kyoga increased by 10%	Develop and implement fisheries management plans at BMU and DBMU levels.	FMC, DBMUCs, SCBMUCs BMUs and MCS Units	320,000 per patrol 0.3/month co-ordinator Yr1:157.2M Yr2:111.12M Yr3:80.4M	Yr 1: 4 units conducting 10 patrols a month and one co-ordinator Yr 2: 7 patrols a month Yr 3: 5 patrols a month	2004-2007
4.2 Average daily catch of 5 inch mesh gill net increased by 10% per year	Design and implement community based monitoring, control and surveillance (MCS) programme	FMC, DBMUCs, SCBMUCs BMUs and MCS Units	Costs of MCS as above	MCS programme as above	2004-2007
4.3 Percentage of unlicensed boats reduced by 20% per year	Develop and gain lake wide agreement on participatory procedures for issuing vessel licences Implement and monitor new licensing procedures	FMC, DBMUCs, SCBMUCs BMUs and MCS Units	Yr1:20M per regional workshop = 60M 100US\$/sheet = 10M/year	Awareness raising on new licensing procedures Printing 50,000 2 sided forms	2004-2005 2004-2005
4.4 Number of fisheries by-laws and ordinances approved and enacted, including setting up of prohibited fishing zones	FMC to draft and agree bylaws to be discussed by every BMU Assembly BMUs to take agreed bylaws to Sub-Counties for approval and implementation	FMC, DBMUCs, SCBMUs and BMUs FMC to coordinate Sub County		Within meeting costs of LAKIMO, BMUs and Sub-County Councils	2004-2007

		Councils			
4.5 Number of boats using illegal gears decreased by 25% per year	Design and implement community based monitoring, control and surveillance (MCS) programme Support access to credit for buying legal gears	FMC, DBMUCs, SCBMUCs BMUs and MCS Units FMC, DBMUCs, SCBMUCs	Costs of MCS as above	MCS programme as above	2004-2007
4.6 Number of cases prosecuted successfully	Support BMUs and Fisheries Officers in taking cases to court	FMC, MCS units and DFOs	DFOs and FOs attend court cases	DFR organising training of DFOS as prosecutors	2004-2007
4.7 Value of fish increased by 10% per year	Promote improved quality of fish through better fish handling facilities and practices	FMC, DBMUCs, SCBMUCs BMUs and MCS Units	Costs of MCS as above	MCS programme as above	2004-2007
4.8 Illegal trading of fish on land reduced by 10% per year	Support effective implementation of the issuing of Fish Movement Permits and close working between Fisheries Officers and law enforcement officers.	FMC, DBMUCs, SCBMUCs, BMUs, FOs and law enforcement officers	Costs within awareness raising programmes e.g. radio, leaflets in local languages	BMUs and FOs take local action supported by district authorities and DFR. Collaborate with centralised patrol operations	2004-2007

YEAR	YEAR 1	YEAR 2	YEAR 3	TOTAL
TOTAL	227.2M	121.12M	90.4M	438.72M

Table 7.5 Output 5: Environment and natural resources sustainably managed

Targets	Action areas	LAKIMO lead, with support	Indicative costs	Explanation	Timeframe
5.1 All projects and programmes conform to environment regulations	<ul style="list-style-type: none"> Engage in assessing the potential environmental impacts of the planned degazettment of Pian Upe 	PFC and EC, Secretariat	-	No cost	2004-2007
	<ul style="list-style-type: none"> Support local governments, especially DEOs, in enforcing environmental regulations through the use of environmental checklists 	PFC and DEOs	-	Sharing and documenting experiences through planned meetings	
5.2 Soil and water conservation measures adopted around the lake and catchment area	<ul style="list-style-type: none"> Lobby for soil and water conservation measures to be included in development plans and implemented, including afforestation programmes Buffer zone protection of lakeshores and river banks 	PFC, DEOs, DAOs, District Forestry Officers, NEMA	20M/year	Awareness raising, enforcement	2004-2007
5.3 Reduction in encroachment of wetland area	<ul style="list-style-type: none"> Encourage and support districts in producing wetland action plans and in assisting communities to form wetland user associations and develop and implement wetland action plans 	PFC, DEOs and Wetland Officers, WID	Yr1: 80M Yr2: 80M Yr3: 85M	49 SC Wetland Action Plans over 3 years.	2004-2007
	<ul style="list-style-type: none"> Support districts in developing and enforcing wetland and sudd ordinances 	DEOs, District Wetland Officers, PFC	-	No cost	

		and WID			
5.4 Mitigation measures to minimise the negative environmental impacts of the removal of the sudd blockage implemented	<ul style="list-style-type: none"> Establish LAKIMO as a key stakeholder in the process of assessing the environmental impacts of the removal of the sudd blockage and in designing the removal programme 	LAKIMO Chair, EC, PFC and Secretariat	600M	Support to EIA	2004-2005

YEAR	YEAR 1	YEAR 2	YEAR 3	TOTAL
TOTAL	700M	100M	105M	905M

Table 7.6 Total costs (in millions US\$)

Output	Year 1	Year 2	Year 3	Total
1	381	516	396	1,293
2	118	118	118	354
3	2,332	2,307	1,552	6,191
4	227	121	90	438
5	700	100	105	905
Total	3,758	3,162	2261	9,181

8. IMPLEMENTATION, MONITORING AND REVIEW

8.1 Introduction

The implementation of the LKMP will involve many stakeholders and partners, which will require integration of issues and actions into the work plans and operational plans of partners, and into local government development plans through the planning processes. Monitoring and evaluation are essential components of implementation, as is the system of annual review to roll on the plan over a three year period.

8.2 Implementation of the Plan

The LKMP will be implemented through many different routes, reflecting the vast area the plan covers, the different priorities between districts and sources of funding and support available. The main routes for implementation are:

- Integration of components into local government development plans.
- Integration into BMU beach development plans and fisheries management plans.
- District fisheries management plans, which themselves must be part of the district development plan.
- National government programmes
- The work of the Standing Committees, e.g. the Fisheries Management Committee will oversee Community Monitoring, Control and Surveillance and the work of the Fisheries Research Unit.
- The plans and programmes of development partners, for example in supporting HIV/AIDS interventions.

The members of LAKIMO must lobby for the inclusion of their priorities in local government plans, in BMU plans and in the plans of national government and development partners.

Involving all stakeholders in the implementation of the LKMP is critical to its effective and timely implementation. As there are so many stakeholders involved in managing and using the lake resources, it is critical that there is commitment from all to work towards more sustainable and participatory management and use, for improvements in the productivity of the lake and in the livelihoods of poor communities. The stakeholders include:

- Beach Management Units and committees at Sub-County and District level
- Those benefiting from the fisheries activities (including fish processing and trading)
- Local governments at District, Sub-county and Parish levels, particularly the Planning, Production and Agriculture departments, but also Health, Education, Community Development and Engineering.
- Department of Fisheries Resources
- Directorate of Water Development

- Wetlands Inspectorate Division
- National Environment Management Authority
- The national Sanitation Working Group
- The Northern Uganda Social Action Fund

The implementation of LKMP will require incorporation of relevant actions into the plans and budgeted activities of many of these stakeholders.

Different districts, sub-counties and parishes have access to different types of existing and potential funding sources. Some of the districts are LGDP compliant, whereas others do not attract bonus funds from LGDP. Some of the districts can access funding from the Plan for the Modernisation of Agriculture (PMA) and some are pilot districts for particular initiatives before roll out to the rest of the country. Each local government should be aware of the funding opportunities available for different components of this plan and, through integration of the components into the development plans, can attract relevant funding.

In addition, each district has different development partners and NGOs funding programmes and initiatives. Once the LKMP is integrated into development plans, appropriate development partners and NGOs can be approached for funding and technical support. In the area of HIV/AIDS, for example, there are many development partners and government programmes offering support for different types of interventions. Government officers and BMU representatives should promote the needs of BMU members and attract suitable support.

8.3 Monitoring and Evaluation Framework

Table 8.1 sets out a monitoring and evaluation plan to monitor the implementation of this plan and to contribute to the evaluation of the performance of LAKIMO. Each of the targets set out in the action plans in Chapter 7 has at least one indicator associated with it, to ease monitoring. Many of the targets are almost indicators, but the M&E plan has simplified targets where appropriate and ensured that it is clear what information is needed to monitor progress in implementation.

The M&E plan sets out the output (by number), target (by number), indicator, who is responsible for collecting the information, where the information should come from and how often it should be collected.

The information collected for the indicators will provide a picture of whether the current situation is moving towards or away from the targets, and, therefore, whether the output is being reached.

Evaluation of the effectiveness of the plan concerns asking whether the purpose of the plan is being achieved. This is through gathering information for the purpose level 'objectively verifiable indicators' (OVIs), as set out in Table 8.2. The performance of LAKIMO in achieving the purpose of the plan can then be assessed by giving a score for each OVI. Where scores are low,

action must be identified, referring to relevant targets, indicators and action areas.

In summary, the process of M&E within LAKIMO will consist of:

1. Regular collection of information by BMUs, local government officers, PFC, FMC and ES, as set out in the PFC and FMC work plans.
2. Information brought to quarterly PFC and FMC meetings to assess progress. At least one person on each committee should have the overall responsibility for overseeing the implementation of the M&E plan.
3. The M&E form should have columns for recording data for each quarter of a year.
4. The ES should then compile an M&E report for the implementation of the plan for discussion at quarterly EC meetings. The purpose of this is to highlight areas where implementation is not moving on well, so that appropriate action can be planned and undertaken.
5. Evaluation using Table 8.2 should take place on an annual basis, using information from a small survey and from the Local Government Information Communication System (LOGICS) in each district. The scoring would be based on a comparison of the data against each indicator to the highest possible result. A 'good' score would indicate that progress is completely on target and that the OVI has been, or will be, achieved within the timeframe of the plan. A 'satisfactory' score would be given when there has been some progress made in the right direction, but the OVI is not fully being. A 'not satisfactory' score would be given when there is no progress being made and there is a move away from achieving the OVI. In the cases of 'satisfactory' and 'not satisfactory', clear action points should be set out by the EC to improve the situation.
6. The monitoring and evaluation can then be used for the annual review of the plan and review of the performance of LAKIMO.

The M&E plan should be revised along side the review of the plan, to reflect achievements made and to ensure incentives for delivery exist. It is imperative that components of the M&E plan are integrated into local government M&E plans and systems. The evaluation of the plan through the purpose level OVIs makes use of LOGICS, so good linkage between the M&E systems of the districts and LAGBIMO will be essential. The M&E plan of LAGBIMO should then have some influence on the use of LOGICS by the three districts and information from the systems can be used to feed into the LAGBIMO M&E.

8.4 Annual Review of the Plan

The LKMP will be reviewed on an annual basis and rolled over within the three year time frame. Many of the actions set out in Chapter 7 will be implemented within local government work plans, as activities that are already within the remit of local government. Further funds for the implementation of the plan and to support the operation of LAKIMO will be sought.

Table 8.1 Monitoring and evaluation plan for LKMP

Output	Targets	Monitoring Indicators	Responsible person	Source of data	Frequency
1	1.1	Information for LAKIMO performance monitoring system generated	ES	Minutes of LAKIMO committee meetings	Quarterly
		Results of LAKIMO performance monitoring used in EC meetings	ES and EC	Minutes of EC meetings	Quarterly
	1.2	Number of BMUs performing at least satisfactorily	FMC to co-ordinate	BMU performance monitoring	Annual
		1.3	Funding for BMUs and LAKIMO committed in local government development plans and budget framework papers	ES and EC	Monitoring reports to EC on committed funds
	Funding received by LAKIMO		ES to report	Monitoring reports to EC on committed and received funds	Quarterly
	1.4	Capacity building activities conducted	ES/PFC/FMC	Minutes of meetings	Quarterly
	1.5	Number of District, Sub-County and local environment committees in place	PFC/DEO/DP	PFC to obtain information	Annual
Number of meetings in a year of each environment committee		PFC/DEO/DP	PFC to obtain information	Annual	
2	2.1	Communication activities for LAKIMO carried out	EC/PFC	Secretariat update	Quarterly
	2.2	Number of LAKIMO Committee meetings using information generated	Secretariat	Secretariat to monitor	Quarterly
	2.3	Number of BMUs plans produced	FMC/SC Chiefs	FMC to collate	Annual
		Number of PDPs/SDPs including BMU plan priorities	FMC/PFC/SCs	Secretariat to analyse; produce report	Annual

Output	Targets	Monitoring Indicators	Responsible person	Source of data	Frequency
	2.4	Fisheries Management Strategy developed	FMC	Minutes of FMC meetings	Annual
	2.5	Number of district fisheries management plans developed	FMC	Minutes of FMC meetings	Annual
		Number of district fisheries management plans integrated into DDPs	FMC/PFC	Secretariat to analyse; Minutes of FMC meetings	Annual
	2.6	Number of BMUs submitting fisheries information to SCBMUC	FMC	SCBMUC reports to FMC	Quarterly
		Number of SCBMUC, DBMUC and FMC meetings discussing fisheries information	FMC	SC and DBMUC reports to FMC; Minutes of FMC meetings	Quarterly
	2.7	Information from fisheries research programme discussed at FMC meetings	FRU	Minutes of FMC meetings	Quarterly
	2.8	Number of districts with wetland action plans	PFC/DEOs	Minutes of PFC meetings	Annual
	3	3.1	Number of BMUs with safe drinking water	PFC/DWAtO	LOGICS; survey; LG reports
3.2		Number of lakeside Parishes with a health unit	PFC/DDHS	LOGICS; survey; LG reports	Annual
3.3		Number of children aged between 6-13 enrolled in primary schools	PFC/DEdO	LOGICS; survey; LG reports	Annual
3.4		Number of households in BMUs with a pit latrine	PFC/DWatO	LOGICS; survey; LG reports	Annual
3.5		Number of BMUs with at least one 2 stance ECOSAN	PFC/DWatO	LOGICS; survey; LG reports	Annual
3.6		Number of ferry services operating	EC	Minutes of EC meetings	Annual
3.7		Number of BMUs with improved fisheries infrastructure	PFC/FMC	SC, DBMUC reports; FMC minutes	Annual
3.8		Number of BMUs with HIV/AIDS interventions available	PFC/DDHS	LG records	Annual

Output	Targets	Monitoring Indicators	Responsible person	Source of data	Frequency
	3.9	Number of BMUs with a trained community health worker	PFC/DDHS	LG records	Annual
	3.10	Number of BMUs accessing Functional Adult Literacy (FAL) services	PFC/DEdO	LG records	Annual
	3.11	Number of BMUs have good access to saving schemes for all stakeholder groups	PFC/DCDO	Survey; SCBMUC reports	Annual
	3.12	Number of BMUs have at least some boat crew members using savings facilities	PFC/DCDO	Surveys; SCBMUC reports	Annual
	3.13	Number of lakeside SDPs include activities that promote non-fisheries income generating activities, with allocated funds	PFC/SC Chiefs	SDPs; Minutes of PFC meetings	Annual
	3.14	Number of BMUs with improved feeder roads	PFC/DPs	DDPs; SCBMUC reports	Annual
4	4.1	Total annual fish catch of Lake Kyoga	FMC	Analysis of lake wide CAS data	Annual
	4.2	Average daily catch of 5 inch mesh gill net	FMC	CAS data	Quarterly
	4.3	Number of unlicensed boats operating per month	FMC/MCS units	MCS reports	Quarterly
	4.4	Number of fisheries by-laws and ordinances approved	FMC	Minutes of district and SC Council meetings	Annual
	4.5	Number of boats using illegal gears	FMC/MCS units	MCS reports	Quarterly
	4.6	Number of cases successfully prosecuted	FMC	FMC minutes	Quarterly
	4.7	Average price of Nile Perch, Nile Tilapia and Mukene per kg	FMC	CAS data	Quarterly

Output	Targets	Monitoring Indicators	Responsible person	Source of data	Frequency
	4.8	Number of BMUs issuing Fish Movement Permits	FMC/DBMUCs	DBMUC reports; Minutes of FMC meetings; BMU perf monitoring	Annual
		Number of prosecutions by district for illegal trading and transport of fish on land	FMC/DFOs	FMC minutes; LG records	Annual
5	5.1	Number of districts using environmental checklists to assess projects	PFC	Information from DP and DEOs	Annual
	5.2	Number of districts with soil & water conservation measures in DDP	PFC/DAO and DEO	DDPs and LG reports	Annual
	5.3	Number of wetland association groups	PFC/DEO	DDPs and DEO reports	Annual
		Number of environmental ordinances (environment, wetland and sudd)	PFC	District Council minutes	Annual
	5.4	Number of mitigation measures recommended by EIA for sudd blockage removal implemented	PFC/EC	Sudd Steering Committee reports; Minutes of EC meetings	Quarterly

Table 8.2 LKMP Evaluation: Purpose level OVIs

Purpose

To improve livelihoods and reduce poverty within lake dependent communities through sustainable management of natural resources

Target	Indicator	Score*	Action
30% increase in number of BMUs with improved sanitation	Number of BMUs with improved sanitation		
30% increase in BMUs with clean drinking water	Number of BMUs with clean drinking water		
70% of BMUs with effective participation of women and boat crew in decision-making	Number of BMUs with effective participation of women and boat crew in decision-making		
50% of BMUs with plan priorities incorporated into PDPs and SDPs, developed according to HPPG	Number of BMUs with priorities incorporated into PDPs and SDPs		
	Number of PDPs and SDPs developing according to HPPG		

*Performance score:

Good = 3

Satisfactory = 2

Not satisfactory = 1

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Annex 1 Lake Kyoga Management Plan: logical framework

Narrative Statement	Objectively Verifiable Indicators	Means of Verification	Risks/Assumptions
Goal			
Good living standard, free from poverty, within lake dependent communities using and sustainably managing productive natural resources in a clean and healthy environment			
Purpose			
To improve livelihoods and reduce poverty within lake dependent communities through sustainable management of natural resources	<p>30% increase in number of BMUs with improved sanitation</p> <p>30% increase in BMUs with clean drinking water</p> <p>70% of BMUs with effective participation of women and boat crew in decision-making</p> <p>50% of BMU plan priorities incorporated into PDPs and SDPs, developed according to HPPG</p>	<p>Local government: LOGICS and sector reports</p> <p>Local government: LOGICS and sector reports</p> <p>BMU annual performance monitoring reports</p> <p>PDPs and SDPs; minutes of PFC meetings; LAKIMO M&E reports</p>	<p>Security situation conducive for improved livelihoods</p> <p>Local governments maintain co-operation within LAKIMO</p> <p>Policy environment conducive for poverty focused integrated lake management at national and local level</p> <p>Climatic conditions conducive for increased fish population</p>
Outputs			
Output 1 Management institutions with improved capacities and effectively operating	<p>All LAKIMO structures performing at least satisfactorily</p> <p>50% of BMUs performing at least satisfactorily</p>	<p>LAKIMO annual performance report; Lake Kyoga Assembly minutes</p> <p>Annual report on performance of BMUs</p>	<p>Local governments and BMUs deliver financial commitments to LAKIMO</p> <p>BMUC and other committee members</p>

	<p>Sustainable funding for BMUs and LAKIMO</p> <p>Capacity building plan developed and implemented</p> <p>District, Sub-County and local environment committees meet and operate effectively</p>	<p>Minutes of EC meetings; DDPs and BFPs</p> <p>Minutes of PFC, EC and FMC meetings</p> <p>Minutes of PFC meetings, district reports, minutes of environment committees</p>	<p>make effective use of their capacity building and use the experience to build capacity of others</p>
<p>Output 2 Information for planning, management and development available and used</p>	<p>LAKIMO institutions using information management and dissemination strategy</p> <p>Information system generates data for LAKIMO structures</p> <p>At least 50% of BMUs produce plans and advocate for their integration into Parish Development Plans</p> <p>Fisheries Management Strategy developed and implemented</p> <p>District fisheries management plans developed and implemented</p> <p>Fisheries information collated and discussed in all SCBMUC, DBMUC and FMC meetings</p> <p>Fisheries research programme generates information to address key management questions</p>	<p>Information strategy</p> <p>Minutes of PFC, FMC and EC meetings</p> <p>Minutes of PFC, FMC and EC meetings</p> <p>Minutes of PFC and FMC meetings; PDPs; LAKIMO M&E reports</p> <p>FMS; Minutes of FMC, SCBMUCs and DBMUCs</p> <p>District Fisheries Management Plans; minutes of DBMUCs and FMC</p> <p>Minutes of SCBMUC, DBMUC and FMC meetings</p> <p>Minutes of FMC meetings</p>	<p>Information management systems within co-operating local governments maintained and information disseminated</p> <p>Support from national government to LAKIMO and local governments on information management and research supplied</p>

<p>Output 3 Delivery of and access to services improved</p>	<p>At least 50% of BMUs with safe drinking water</p> <p>At least 25% of lakeside parishes with a health unit</p> <p>At least 80% of children aged 6-13 enrolled in primary schools</p> <p>At least 50% of households in BMUs with a latrine</p> <p>All BMUs with at least one 2 stance public Ecosan</p> <p>Ferry services operating between the south and east and west of the lake</p> <p>At least 40% of BMUs with improved fisheries infrastructure</p> <p>HIV/AIDS interventions available at all BMUs</p> <p>At least 50% of BMUs with a trained community health worker</p> <p>At least 50% of BMUs accessing Functional Adult Literacy (FAL) services</p> <p>At least 50% of BMUs have good access to savings schemes for all stakeholder groups</p> <p>At least 40% of BMUs have at least</p>	<p>Minutes of PFC and FMC meetings</p> <p>LAKIMO M&E reports</p> <p>BMU plans, PDPs, SDPs and DDPs</p>	<p>Security situation conducive to good service delivery</p> <p>Partners organisations recognise the need for investment in, and support to, fishing communities and allocate funds accordingly</p> <p>Organisations working to tackle HIV/AIDS include fisheries communities in their activities and recognise, and respond to, specific challenges within these communities</p>
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	<p>some boat crew members using savings facilities</p> <p>At least 30% of lakeside SDPs include activities that promote non-fisheries income generating activities, with allocated funds</p> <p>At least 20% of BMUs with improved feeder roads</p>		
<p>Output 4 Fisheries sustainably increased and equitably accessed</p>	<p>Annual total catch of Lake Kyoga increased by 10%</p> <p>Average daily catch of 5 inch mesh gill net increased by 10% per year</p> <p>Percentage of unlicensed boats reduced by 20% per year</p> <p>Number of fisheries by laws and ordinances approved and enacted</p> <p>Number of boats using illegal gears decreased by 25% per year</p> <p>Number of cases prosecuted successfully</p> <p>Value of fish increased by 10% per year</p> <p>Illegal trading of fish on land reduced by 10% per year</p>	<p>LAKIMO Fisheries Management Strategy</p> <p>Minutes of FMC meetings</p> <p>MCS reports</p> <p>LAKIMO M&E reports</p>	<p>All fisheries stakeholders understand and are committed to fisheries co-management</p> <p>Central government efforts in MCS work with BMU/LAKIMO through the implementation of the Fisheries Management Strategy</p> <p>Demand for fish increases, with good prices maintained</p> <p>Support to women and boat crew in seeking to own boats made available</p>
<p>Output 5 Environment and natural resources</p>	<p>All projects and programmes conform to environment</p>	<p>Minutes of PFC meetings</p> <p>LAKIMO M&E</p>	<p>Sudd blockage issue addressed</p>

<p>sustainably managed</p>	<p>regulations</p> <p>Soil and water conservation measures adopted around the lake and catchment area</p> <p>Reduction in encroachment of wetland area</p> <p>Mitigation measures to minimise the negative environmental impacts of the removal of the sudd blockage implemented</p>	<p>reports</p> <p>PDPs, SDPs and DDPs</p> <p>Wetland Action Plans</p> <p>Reports by DEOs and District Wetland Officers</p>	
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Annex 2 Environmental Legislation and Support to Districts

Brief Description of Key Environment Legislation Relevant to Lake Kyoga Management Plan

Legislation/Law	Brief Description	Rationale
<p>1. The National Environment Act (Cap 153)</p>	<p>This Act is a framework law that provides for wise use and sustainable management of all components of the environment, namely land, water, air, plants, animals and man-made elements. This law protects the right of every person living in Uganda to a clean and healthy environment, but conversely requires every person in Uganda to fulfill the duty of maintaining a clean and healthy environment.</p> <p>The law establishes the following organs among others, to manage the environment:</p> <ul style="list-style-type: none"> (i) National Environment Management Authority (NEMA) (ii) District and Local Environment Committees (iii) District Environment Officer <p>The law requires the following:</p> <ul style="list-style-type: none"> (i) Planning for and integration of environment concerns into development activities at all levels; (ii) Development and enforcement of environmental regulations (such as Environment Impact Assessment regulations) and standards; (iii) Wise use and proper management of lakes, rivers, lakeshores, riverbanks, wetlands forests, hills, mountains, forests, land, biological diversity, ozone layer etc; (iv) The law also requires pollution to be controlled, environmental 	<p>Environment and natural resources such as water, soil, air, forests and animals provide goods and services that are required by man for socio-economic development for today and the future. These resources must therefore be used wisely to avoid deterioration e.g. loss of soil fertility through soil erosion, deforestation, drying of lakes, rivers and wetlands, pollution of water bodies and loss of biodiversity.</p> <p>There must be an institution to take leadership to ensure proper management of the environment and therefore NEMA is created at the central government level. The District and local environment committees of Local Councils and the District Environment Officers are the leaders at district and community levels.</p> <p>These organs ensure that the various provisions of the law are adhered to at various levels.</p>

Legislation/Law	Brief Description	Rationale
	<p>restoration to be carried out and environmental monitoring and inspection to be conducted;</p> <p>(v) The law creates offences and penalties for violating any of the requirements above among others</p>	
<p>2. The National Environment (wetlands, riverbanks and lake shores management) Regulations, 2000</p>	<p>These regulations are made under the provisions in the National Environment Act, Cap 153. These regulations provide for proper management, wise use and conservation of wetlands and resources on river banks and lakeshores.</p> <p>The regulations provide for the following:</p> <p>(i) Traditional uses of wetlands such as harvesting papyrus, medicinal plants, trees and reeds, collection of water, fishing using traps</p> <p>(ii) Non traditional activities shall only be carried out with permission or permit from the Executive Director, NEMA and environment impact assessments shall be carried out for these activities as required by the National Environment Act;</p> <p>(iii) The following protection zones shall be observed on riverbanks and lakeshores</p> <ul style="list-style-type: none"> - Big rivers (e.g. R. Nile, Mpologoma) listed in the guidelines, 100m from the highest water marks - Small rivers, 30m from the highest water mark - Big lakes listed in the regulations (e.g. lake Kyoga, Lake Bisina, Lake Opeta) 200m from the lowest water mark and small lakes 100m from the lowest water mark <p>(iv) Activities in the protected zones are carried out under permit. The Technical Committee on biodiversity, the local councils,</p>	<p>The wetlands, riverbanks and lakeshores contain unique resources and provide goods and services used for livelihoods. These include water, wood resources, wild animals, thatching material. These areas also control floods, siltation and pollution of lakes and rivers. They must therefore be used wisely and protected from degradation, if not we lose grazing grounds, water and wood sources and there may be floods, pollution of rivers and lakes, decline in fish catch from water bodies and at worst drying altogether of water bodies.</p> <p>These areas have to be used under strict conditions and permits, with guidance from the Executive Director NEMA, District Environment Officers, the District and Local Environment Committees and the Local Councils in general.</p>

Legislation/Law	Brief Description	Rationale
	<p>the district environment officers, district and local environment committees are required to carry out specific activities to protect wetlands, riverbanks and lakeshores.</p>	
<p>3. The Environment Impact Assessment Regulations, 1998</p>	<p>These regulations are made under section 107 of the National Environment Act Cap 153.</p> <p>These regulations require that certain activities such as establishment of industrial estates, transport facilities such as roads and rails, dams, mining and flood control as listed in the third schedule of the National Environment Act, should be subjected to Environment Impact Assessment (EIA) before they are carried out. Consultation with the local community, NGOs, the private sector and other stakeholders is provided for under the regulation</p>	<p>Some development activities such as establishment of dams, mining and road construction may cause significant negative impacts on the environment and affect the livelihood of the people. Such negative impacts need to be identified and measures to control such impact be planned for before the activity/project/policy is implemented. These resources are used in various ways by the different stakeholders, therefore all interest groups should, as much as possible, be consulted.</p>
<p>4. The National Environment (Standards for Discharge of Effluent into water or land) Regulations, 1999</p>	<p>These regulations describe/provide for the maximum permissible limits of concentrations of various chemicals in water to be discharged into water or land</p>	<p>Higher concentration of chemicals in effluent (waste water to be discharged into water or land) may cause pollution of land and water bodies. It is therefore necessary to set and enforce maximum concentrations of these chemical (listed under the regulations) in effluent from industries and other economic activities.</p>

Environmental Management and Capacity Building Program in the NEMA EMCBP II Focal Districts

The districts of Pallisa, Lira, Kamuli and Kumi are among the 27 focal districts under Environmental Management and Capacity Building Project II which is coordinated by NEMA. The following support is being provide to the districts:

- (i) Training and support to activities of district and local environmental and technical committees, District and Municipal Environment officers and NGOs;
- (ii) Provision of logistical support including operational funds, computer and accessories, photocopier, bicycles and a motorcycle;
- (iii) Environmental planning at all levels and integration of environment plans into development plans at relevant levels;
- (iv) Ecosystem planning;
- (v) Implementation of priority environment management and restoration projects based on environment and development plan priorities;
- (vi) Formal and non-formal environment education and public awareness and Environment information and reporting programs; and
- (vii) Environmental monitoring and enforcement.

Other Programs Supported by NEMA in the Ten LAKIMO Districts

The EMCBP II package for all the districts in Uganda includes:

- (i) Training and support to activities of district and local environmental and technical committees, District and Municipal Environment officers and NGOs;
- (ii) Ecosystem planning where applicable;
- (iii) Formal and non-formal environment education and public awareness; and Environment information and reporting programs; and
- (iv) Environmental monitoring and enforcement.

Annex 3 Summary of Environment Action Plan Priorities

Lira (Synthesis of PEAPs and 6 SEAPs)

Environmental issue	Proposed actions	Timing	In SDP/ PDP? (Y/N)	Possible Funding sources
Poor/lack of sanitation facilities	<ul style="list-style-type: none"> • Construction of lined latrines which can be emptied • Construction of fish drying/handling stands • Construction of a waste disposal land fill • Enacting by-law on waste disposal 	2004-06 2005 2004-06	Y Y Y N	LDG + others LDG + others LDG + others
Gulleys at landing sites	<ul style="list-style-type: none"> • Filling the gulleys with sand bags and planting parpalum • Planting of trees • Creation of foot path and talking compound 	2004-06 2005 2004-05	Y N N	EMCBP II + others
Deforestation	<ul style="list-style-type: none"> • Planting trees • Opening tree nurseries • Constructing and training in energy saving kilns and stoves • Training and awareness creation 	2004-06 2004-05 2004-06 2004-06	Y Y Y Y	LDG; EMCBP II LDG + others LDG; EMCBP II LDG; EMCBP II
Unsafe drinking water	<ul style="list-style-type: none"> • Training and sensitisation on safe water • Sinking of deep wells • Enacting by-laws that protect water source from contamination 	2004-06 2004-06 2004-06	Y Y Y	
Settlement within the protected zone	<ul style="list-style-type: none"> • Sensitising the fishing community of the existence of the law • Negotiations for fishing villages to be relocated outside the protected zone of the lake shores 	2004-06 2004-06	Y Y	LDG EMCBP II LDG
Cultivation of the lake shores	<ul style="list-style-type: none"> • Sensitisation of stakeholders • Enforcement of the laws protecting lake shores in Uganda 	2004-05 2004-05	Y N	EMCBP II
Lake pollution	<ul style="list-style-type: none"> • Planting paspalum and trees • Construction of lined latrines which can be emptied • Construction of land fills and rubbish pits for fish waste and other waste 	2004-05 2004-05 2004-05	Y Y Y	LDG, EMCBP II LDG

Sub-counties: Awelo, Namasale, Muntu, Aputi, Agwata, Kwera

Kumi: Synthesis of 8 PEAPs

Environmental issue	Causes	Proposed actions
Deforestation	<ul style="list-style-type: none"> • Clearance of land for agriculture • Lack of alternative sources of fuel/energy • Ready and near market for forest/tree products • Charcoal/brick burning • Population increase 	<ul style="list-style-type: none"> • Education of communities on dangers of deforestation • Construction of energy saving stoves in homesteads • Tree planting • Formulate and enforce by-laws
Bush burning	<ul style="list-style-type: none"> • Negligence • Need for fresh grass for livestock • Need to flush out wild animals during hunting 	<ul style="list-style-type: none"> • Education of communities on the dangers of bush burning • Formulate by-laws
Unmaintained village	<ul style="list-style-type: none"> • Negligence • Lack of vigilance on the part of local leaders 	<ul style="list-style-type: none"> • Formulate and enforce by-laws • Motivate local leaders
Inadequate safe water sources	<ul style="list-style-type: none"> • Prevalence of unprotected springs/wells • Poor maintenance of boreholes • Sharing of water sources with livestock 	<ul style="list-style-type: none"> • Protection of wells/springs • Drilling of boreholes • Maintenance of existing boreholes • Community sensitisation
Poor sanitation	<ul style="list-style-type: none"> • Negligence • Lack of vigilance on the side of local leaders • Primitive cultural beliefs 	<ul style="list-style-type: none"> • Education of communities on sanitation requirements • Formulate by-laws • Motivate local leaders
Poor farming methods/soil erosion	<ul style="list-style-type: none"> • Negligence on the part of farmers • Inadequate extension services • Shortage of land • Deforestation • Ploughing along the contours • Overstocking • No grass strips between fields 	<ul style="list-style-type: none"> • Education of farmers on good agricultural practices (including soil conservation methods) • Motivation of extension staff • Setting up and enforcing by-laws • Growing cover crops • Reduction of livestock numbers
Over grazing	<ul style="list-style-type: none"> • High stocking rates • Land shortage • Ignorance 	<ul style="list-style-type: none"> • Rotational grazing • Sensitisation of communities
Crop pests and diseases	<ul style="list-style-type: none"> • Mono-cropping • Growing of same crop in the same field for consecutive years • Lack of spraying • Inadequate extension services 	<ul style="list-style-type: none"> • Mixed cropping • Crop rotation • Spraying • Sensitisation of the community
Animal diseases	<ul style="list-style-type: none"> • Prevalence of ticks • Limited knowledge 	<ul style="list-style-type: none"> • Sensitization • Spraying

	<ul style="list-style-type: none"> • Lack of clean drinking water for animals • Negligence • Bushy environment 	<ul style="list-style-type: none"> • Treating • Tsetse fly trapping • Construction of cattle dips • Vaccination/spraying of animals
Wetland degradation	<ul style="list-style-type: none"> • Infertility of the upland • Shortage of land • Sand/clay mining • Rice cultivation • Poor fishing methods • Population increase 	<ul style="list-style-type: none"> • Demarcation of the wetland reserves • Formulate and enforce by-laws • Sensitization of the community • Growing of upland rice and high value crops
Poor maintenance of village roads	<ul style="list-style-type: none"> • Negligence • Lack of vigilance on the part of local leaders 	<ul style="list-style-type: none"> • Formulating and enforcing by-laws • Sensitisation of the community
Poor solid waste disposal	<ul style="list-style-type: none"> • Negligence • Limited knowledge 	<ul style="list-style-type: none"> • Sensitize the community • Set up and enforce by-laws
Over fishing	<ul style="list-style-type: none"> • Poor methods of fishing • Lack of alternative sources of income 	<ul style="list-style-type: none"> • Sensitization of communities on good fishing methods • Formulation and enforcing of by-laws • Fish farming
Lack of awareness on environmental issues	<ul style="list-style-type: none"> • Inadequate sensitisation of communities on environment 	<ul style="list-style-type: none"> • Sensitisation of communities on environment issues • Training of trainers on informal environment education

Parishes: Omiito, Aciisa, Akide, Ngora, Oseera, Tisai, Agule, Mom Kakise

Katakwi: Synthesis of environmental priorities from 3 Sub-counties and 6 Parishes

Environmental issue	Proposed actions
Reduce contamination due to poor sanitation/hygiene	<ul style="list-style-type: none"> • Sensitization of communities in landing sites • Establishment of latrines in landing sites • Monitoring of sanitation coverage in landing sites and enforcement
Reducing soil erosion resulting from poor agricultural practices	<ul style="list-style-type: none"> • Sensitisation of farmers on proper agricultural practices e.g. mulching, grass bunds, etc. • Monitoring of agricultural practices
Reducing soil erosion resulting from uncontrolled bush burning and deforestation	<ul style="list-style-type: none"> • Sensitisation workshops • Provision of fast growing seedlings • Monitoring of tree planting
Implementation of regulation of lakeshores	<ul style="list-style-type: none"> • Sensitisation of communities • Monitoring and enforcement of regulations

Sub-counties (and Parishes): Kapujan (Kapujan and Kokorio), Toroma (Akurao and Ominya) and Magoro (Opeta and Kamenu)

Kamuli: Synthesis of 21 PEAPs

Environmental issue	Included in SDP?	Proposed actions
Lack of safe clean drinking water facilities	Yes	<ul style="list-style-type: none"> • Drilling of boreholes
Low crop yield due to loss of soil fertility	No	<ul style="list-style-type: none"> • Setting up of demonstrations on proper soil and water conservation
Lack of easy access to health units	No	<ul style="list-style-type: none"> • Lobbying for mobile health services from the health centre IVs and eventual construction of health units at parish levels
Poor sanitation and hygiene due to low pit latrine coverage	No	<ul style="list-style-type: none"> • Continued sensitisation and enforcement of the existing laws
Indiscriminate felling of trees for charcoal and timber	No	<ul style="list-style-type: none"> • Tree nursery establishment for replanting
Infestation by mosquitoes	Yes	<ul style="list-style-type: none"> • Improving the sanitation of the area, and sensitising the people on the use of mosquito bed nets
Poor feeder road network	Yes	<ul style="list-style-type: none"> • Planning for opening up and maintaining feeder roads under LGDP II
Indiscriminate disposal of solid waste (most dangerous are plastic containers and polythene bags)	No	<ul style="list-style-type: none"> • Formulation of local by-laws on solid waste disposal
Lack of by-laws regarding the use of wetlands and lakeshores, which led many people buying them and now they are being told to move away.	No	<ul style="list-style-type: none"> • Formulation of ordinances and bye-laws

Parishes: Ikanda, Wesunire, Namusita, Mango, Ndulya, Kigingi, Budomero, Bukungu, Buyanja, Miseru, Kisinda, Panyolo, Bupyana, Iyingo, Kabukye, Nkone, Nawampiti, Nangala, Bukamba, Nawaikoke, Namawa

Nakasongola: DEAP Priorities

Environmental issue	Causes	Proposed actions
Deforestation	<ul style="list-style-type: none"> • Prolonged drought periods have caused endemic food shortages • Inadequate access to water probably as a result of reduction in rain amounts • Soil erosion causing extensive drop in soil productivity • Most useful tree species disappearing without replacement • Wild animals are getting extinct due to lack of sanctuary 	<ul style="list-style-type: none"> • Raise community awareness • Local government to put in place measures to control encroachment, over-harvesting, random charcoal burning and other practices. • Establish tree nurseries.
Vermin/problem animal control	<ul style="list-style-type: none"> • Problem animals attack and destroy food crops – estimated to lead to 40% loss in food yield • This is due to the destruction of their habitat 	<ul style="list-style-type: none"> • Community initiatives, including training of volunteer guards • Encourage communities to grow high yielding crops that are not affected by vermin • District Wildlife Management Unit should control animals in conjunction with Uganda Wildlife Authority
Termites	<ul style="list-style-type: none"> • Termites destroy food and pastures, with impacts on agricultural productivity 	<ul style="list-style-type: none"> • Encourage organic ways of controlling termites • Aggressive tree planting to replace the termite affected vegetation.
Inadequate safe water and poor environmental sanitation	<ul style="list-style-type: none"> • Limited water sources conservation. • Inadequate finances to drill boreholes. • Limited knowledge of environment sanitation • These factors result in high incidence of water borne diseases and much time spent collecting water. 	<ul style="list-style-type: none"> • Raise public awareness about environmental sanitation. • Alternative, cheaper water supply sources should be encouraged. • Set sanitation standards and monitoring guidelines for collaborating agencies. • Development of settlements that contravene sound environmental and health standards should be controlled.
Bush burning	<ul style="list-style-type: none"> • Bush and grass fires, carried out for rejuvenation of pastures or facilitate hunting of game, expose the land to water and wind erosion, reducing agricultural productivity. 	<ul style="list-style-type: none"> • Raise awareness about negative affects of bush burning. • Enact and implement by-laws and ordinances to control bush burning.
Lack of environmental awareness	<ul style="list-style-type: none"> • Lack of capacity in environmental planning and management is leading to unsustainable ENR management. 	<ul style="list-style-type: none"> • Promote environmental awareness and access to information. • Ensure environmental education is integrated into primary and primary school curricula and other public education fora.
Environment management and quality assurance	<ul style="list-style-type: none"> • Inadequate capacity to manage the environment. • Lack of information available for planning and management. 	<ul style="list-style-type: none"> • Establish an Environmental Information System from LCI to LCV. • All developments initiated by private developers and the District Council are subjected to Environmental Impact Assessment. • Develop environmental performance indicators for monitoring health and quality of the environment.

		<ul style="list-style-type: none"> • Manage shared resources across district, sub-county and different resource use boundaries, which are prone to conflict, abuse and neglect, by instituting measures for dialogue and consensus building.
Management of water and wetland resources	<ul style="list-style-type: none"> • Wetlands are being degraded through encroachment. • Legislation on agriculture near river banks, lake shores, etc. not being enforced. 	<ul style="list-style-type: none"> • District shall enact implementation instruments to ensure control of wetland degradation, encroachment and stressing of river banks, pollution of lakes, encroaching of lake shores and over harvesting of lake resources and other wanton acts of non sustainable fishing, guided by the national policies and standards in use. • Resources for implementation of the above and monitoring their impacts should be provided.