

LAKE NAIVASHA MANAGEMENT IMPLEMENTATION COMMITTEE STAKEHOLDERS WORKSHOP

Kenya Wildlife Service Training Institute, 8 October, 1996

EXECUTIVE SUMMARY

- 1.0 The Lake Naivasha Management Implementation Committee under chairmanship of KWS, Kenya's official Ramsar custodian, organised a one-day Stakeholders Workshop on 8 October 1996 to consult all stakeholders and development sectors on the Lake Naivasha Management Plan. This Workshop was called for during a Lake Naivasha Management Plan Workshop on 6th March, 1996. The workshop was attended by over 160 participants from a very wide cross section of the Public, NGOs and Government Departments.
- 1.1 The objectives of this workshop were:-
- To explain the ecological and economic importance of Lake Naivasha
 - To present an overview of the Management Plan
 - To provide information, education and awareness to the stakeholders
 - To identify roles and responsibilities of stakeholders
 - To establish a participatory approach to the Management Implementation Process among all the stakeholders
 - To answer questions and address concerns of the stakeholders on conservation and development issues.
 - To draw conclusions and forward recommendations to the Government
- 1.2 After an overview by Mr. Ottichillo, KWS, of the management issues addressed in the Management Plan and during this Workshop, Lord Enniskillen explained the status and mode of operation of Lake Naivasha Riparian Owners Association (LNROA), the history of the development of the Management Plan, and how and why the LNROA became involved. G. Tomlins, Lake Naivasha Growers Group (LNGG), presented an illustrated overview of the LNGG's Horticultural Code of conduct, which is an integral part of the Management Plan, and gave numerous instances of progress pertaining to the voluntary implementation of the Code of conduct.
- 1.3 This introduction was followed by short presentations from all major stakeholders, development sectors and Government representatives:
1. Mr. S. P.M. Kiai, Ministry of Land Reclamation and Regional Water Development (MLRRWD), p.11
 2. Mr. B. Bakker, Water Resources Assessment Project (WRAP), p.12
 3. Mr. M. N. Mwangi, Kenya Power Company (KPC), p.13
 4. Major (Rtd.) Aussie Walker, Vice Chairperson Kenya Association of Tourism Organisation (KATO), p.13
 5. Mr. Mulandi, Managing Director Horticultural Crops Development Authority (HCDA), p.14
 6. Ms. Jane N. Kinya, Fisheries Department, p.14

7. Ian Marshall, EcoManager, Delamere Farm (for Livestock Industry), p.15
8. Mr. M'Mayi, National Environment Secretariat (NES), p.15
9. Mr. Mwangi Town Clerk, Naivasha Town Development, p. 16
10. Ms. Rowena Costa-Correa, Elsamere Conservation Centres, p.17
11. Dr. Barasa C C Wangila, Moi University (for the Universities), p.18
12. Mr. T. O. Ouko, Hon. Secretary, Lake Naivasha Fishermen Co-operative Society, p.18
13. Mr. Simon Kaniu Kariuki, Chairperson, Mirera Water Project, p.18
14. Mr. John Ndungu Miringu, representing 34 Kihoto Farmers, p.19
15. A representative from Lake Naivasha Pastoralists, p.19
16. Mr. Anderson Koyo, Wetland Coordinator, Kenya Wildlife Service (KWS), p.19

The morning session was closed by Ambassador Bethwel Kiplagat

Following the sixteen presentations, various management issues and problems were discussed, questions addressed to the KWS, the Committee, LNROA and LNNGG were answered and statements were given in a long plenary session.

The plenary discussions and presentations were concluded with the adoption of Workshop resolutions.

The Workshop was closed at 18.15 by Mr. S. K. Mugeru, Acting Deputy Director of the National Environment Secretariat of the Ministry of Environment and Natural Resources.

1.4 WORKSHOP RESOLUTIONS

After further discussions, deliberations, and amendments the final Resolutions adopted by the workshop were as follows:-

1. The Workshop participants give full recognition to the ecological and socio-economic importance of Lake Naivasha locally, nationally and internationally and re-affirm their commitment to ensure the Lake's conservation and continued productivity.
2. The workshop gives endorsement and full support to the Lake Naivasha Management Plan and all the sectoral codes of conduct that are developed within its framework, and requests the Government and all relevant agencies to adopt the plan and give assistance, where appropriate, for effective implementation and continuous development.
3. The Workshop compliments the LNROA, the Management Implementation Committee and all the stakeholders for their initiatives, contributions and role in the development of a community-based Management Plan that aims at creating a wise balance between conservation and development.
4. The Workshop calls upon all the stakeholders in the Lake Naivasha Basin to continue to co-operate and work together during the implementation period by providing material, financial, time and even moral support that are required and necessary for successful implementation of the programme. This is a community-based programme that can only succeed if all participants work in a united and concerted manner based on mutual trust.

5. The Workshop urges the stakeholders, Government and other agencies who have data and relevant information on the lake and its environment to allow access to such data/information which can assist in further research and information generation that would be useful for the revising and updating of the Management Plan and its effective implementation.
6. The Workshop urges all stakeholders to share and/or exchange data, information and technology among themselves that can enhance collaboration as well as wise use of resources by all the parties concerned.
7. The Workshop urges the Government, through the MLRRWD, to give priority to a hydrological study of the Lake Naivasha basin system and make its findings available to the Lake Naivasha Management Implementation Committee at all stages of the study.
8. The Workshop urges the Government to appoint a representative of the Lake Naivasha Management Implementation Committee to the District Water Apportionment Board and the DDC in view of the importance of Lake Naivasha to the Development of Nakuru District and the country's economy.
9. The Workshop urges the Government to give priority to the production of suitable environmental legislation to enable the relevant Government agencies to enforce the plan's principles where appropriate, and also to empower the local community to become the authority for the lake conservation and management within the framework of NEAP.
10. The Workshop recommends that access corridors to the Lake shore and landing points be established, and maintained for the convenience of the fishermen and the general public who wish to use the Lake. Land 50 metres from the papyrus, or 100 metres from the water edge where there is no papyrus, be preserved in their natural state. There should also be a rational and equitable utilisation of the Lake's resources.
11. The Workshop recommends that the Fisheries Co-operative Society be included as a regular member of the Lake Naivasha Management Implementation Committee.
12. The Workshop recommends that a faster enactment of the Environmental Bill be carried out for effective enforcement of the appropriate conservation and management practices in the Lake area.
13. The Workshop recommended that water permits be issued on annual basis based on the water budget and a specification made on the volume of water that must be retained as a reservoir in the Lake/Water body beyond which no abstraction is allowed.
14. The Workshop recommends that a study be conducted to establish the source of the geothermal water and its relation to the lake's hydrological system and also establish its potentials for power generation.
15. The Workshop recommends that routine monitoring of the lake's ecosystem for pollution and biodiversity status be established.

15. The Workshop recommends that routine monitoring of the lake's ecosystem for pollution and biodiversity status be established.
16. The Workshop recommends establishment of fixed boundary lines and beacons to demarcate the extent and limits of the properties surrounding the Lake and stop human encroachment and usage of the land created by the receding water levels.
17. The Workshop recommends that land use around the Lake be defined and irregular practices discouraged. EIA to be effected before any development project in the catchment area is effected.
18. The Workshop recommends that monitoring system be conducted to establish the possibilities that the chemicals reaching the Lake are included in the food chains within the Lake.

LAKE NAIVASHA MANAGEMENT IMPLEMENTATION COMMITTEE STAKEHOLDERS WORKSHOP

Kenya Wildlife Service Training Institute, 8 October, 1996
MINUTES

2.0 INTRODUCTION

The Principal, Dr. B. E. Wishitemi, opened the one day workshop at 8.55 a.m. by welcoming everybody to the Institute. He said that he hoped the workshop would be productive. He then welcomed Mr. Koyo to take over.

Mr. Koyo thanked Dr. Wishitemi and welcomed everybody to the workshop. He looked forward to their fruitful discussion and the outcome of the workshop. He made a few housekeeping announcement to guide the participants, then invited Mr. Ottichillo, the KWS Deputy Director Biodiversity Conservation and Chairperson of the Lake Naivasha Management Implementation Committee, to chair the Workshop.

Mr. Ottichillo thanked Mr. Koyo and welcomed all participants on behalf of the Director of KWS, Dr. David Western, and gave the Director's apologies. The Director was very keen to receive the recommendations that will be made about the management of Lake Naivasha in this workshop. He then invited everybody present to introduce themselves. After the introduction, he said that he was impressed by the number of participants and the wide scope of representation from all sectors, and hoped to get views from all interested stakeholders.

2.1 WORKSHOP OBJECTIVES

Mr. Ottichillo introduced and briefly explained the objectives of the workshop (listed on page 25). The Workshop was intended to give people an overview of a number of management issues that affect Lake Naivasha and its environment and to explain their roles and responsibilities.

He asked the Workshop participants if they had any other objectives that were not covered. When there were none, he gave a general overview of the importance of Lake Naivasha.

1. The Lake is a major fresh water source in this catchment area. Most of the domestic industrial water supply is from the lake. The lake produces water for horticultural activities that generate a very important contribution to the economy of the country.
2. Ranching
3. Grazing
4. Biodiversity - Lake Naivasha is an important national and international lake. In 1995, the Government of Kenya designated the Lake as Kenya's second Ramsar site (wetland sites of international importance). The Lake has a high biodiversity, although not all well-documented. There are over 350 bird species making the Lake a well-known and major tourist attraction.

5. The landscape is very unique and is in itself an attraction.
6. The lake is important in terms of economic development e.g. Olkaria Geothermal Station for power and tourism.
7. Agriculture, especially horticulture
8. Fisheries play a major role in economic development, e.g., employment opportunities
9. Research and scientific role; particularly to local/foreign universities.
10. Education activities, e.g., Elsamere Education Centre
11. Urbanisation - the Lake supports the development of Naivasha Town because of the importance of the activities that take place within the area, the Lake has been instrumental in the urbanisation of the town.

2.2 Management issues to be addressed

1. Encroachment: land allocation has become a major management issue around the lake. There are cases where land has been allocated up to the water edge. This disturbs the ecological stability of the lake. Construction of permanent structures on riparian land also affects the ecological balance and function of the lake.
2. Siltation due to deforestation, and soil erosion due to the agricultural activities. The silt finds its way to the lake, making it less sustainable in the long run.
3. Water abstraction: most of the economic activities are based on water. If not controlled or managed properly, abstraction will have a major negative impact on the lake in the long run.
4. Sub-surface drilling: has an impact on the ground water table which has been going lower.
5. Diversion of inlet rivers due to agriculture and water supply to other urban areas.
6. Pollution due to agro-chemicals (mainly pesticides and fertilisers), which results in nutrients run off into the lake, industrial waste and effluent, sewage effluent.
7. Overgrazing on riparian land.
8. Invasion of weeds, for example *Salvinia molesta*. the weed has been controlled, but it is important to ensure it (or other species) does not re-colonise the lake. A new weed *Eichornia Crassipes* is expanding fast.
9. Introduction of new fish and other species: people should be very careful when doing this.
10. Diminishing re-charge: the volume of river discharge into the lake is decreasing because

of diversion of river water.

11. Diminishing ecological integrity of the lake: because of the various activities, a number of plant and animal species are threatened with extinction. Statistics show that the number of waterfowl species has decreased due to human activities taking place, and even the large mammals have decreased due to lack of space.
12. Increasing imbalance in ecological processes.
13. Inadequate information on hydrology of the area: since this is the key to the Lake's management it is important that this information is availed in order to come up with a management plan for its conservation and management.
14. Lack of information and data on the biodiversity in the lake and catchment areas. We have to take stock of what we have so as to plan activities that have an optimal level of resource utilisation.
15. Lack of clear policy and legislation for effective management of the lake.
16. Ineffective enforcement of existing sectoral laws: the existing legal instruments that address the issue of water bodies are separated in various Acts.
17. Difficulties in co-ordination of various sectors and stakeholders.

3.0 OVERVIEW OF THE LAKE NAIVASHA MANAGEMENT PLAN

By Lord Enniskillen

3.1 Lord Enniskillen, Chairperson of the Lake Naivasha Riparian Owners Association (LNROA), thanks KWS for the opportunity to use the Training Institute facilities and also thanked everybody for attending this Workshop. He explained the status and mode of operation of LNROA, the history of the development of the Management Plan, and how and why the LNROA became involved.

3.2 The LNROA is an association registered under the Societies Act. The Association is open to full membership from any owner of land that borders on Lake Naivasha. It is over 70 years old. Members are custodians of the riparian land around the Lake: the land below the 1,893.8 m.a.s., contour. Below that level, land is Government property granted to contiguous land owners to graze and cultivate, but not to build on. The LNROA arbitrates between land owners in all boundary disputes. Members include small plot owners, hoteliers, KPC, Naivasha Municipal Council, KWS, large horticultural, dairy and ranching operations, research institutions, etc., a wide cross section of stakeholders. The Association is also open to associate, non-voting membership by invitation. Present membership is about 140. Despite sometimes conflicting views among members, they are bound by one overriding, common interest: the well being of the Lake, particularly the quantity and quality of its water.

3.3 Three years ago, the Association initiated and funded the three-phase Management Plan development process to conserve and manage the Lake for sustainable wise use. The current version of the Management Plan is the present outcome of that process. In the process, the Association obtained Government support in April, 1995 for the listing of the Lake as Kenya's second Ramsar Site. In 1990, Kenya had become a signatory to the Ramsar Convention on Wetlands of international Importance. With the designation of Lakes Nakuru and Naivasha, Kenya fulfilled its obligation under that convention.

3.4 Lord Enniskillen provided a brief overview of the ecology of Lake Naivasha as a fresh water lake, unlike most lakes in the Rift Valley. Its surface varies between 102km² in dry years to 150Km² in wet cycles. The volume has varied between 50 million m³ and 600 million m³; it has been dry in the past 120 years. The Lake is a very significant fresh water source for economic activities in an otherwise dry area. The area is thus a major contributor to Kenya's GDP, employment and national development. Yet, with water abstraction in dry years equalling 50 million m³, it approximates the entire content of the Lake when at its lowest recently recorded level.

3.5 With nearby Hell's Gate and Longonot National Parks the Lake is connected through corridors. The Lake contributes over 350 species of birds to this conservation system. In general, its biodiversity and beauty are still very high despite rapidly growing populations and economic activities. However, he emphasised that the Lake cannot sustain much further development at the same pace as in the past 15 years without a Management Plan for coordinated water and other resources use.

3.6 The Chairperson of the LNROA listed more threats to the Lake's survival and supporting capacity, and concluded that there is an urgent need for a voluntarily adopted, community-implemented Management Plan. In September, 1993, the LNROA started the Management Plan development process. The current version of the Lake Naivasha Management Plan, which now includes the Lake Naivasha Grower Group's Code of Conduct as an integral appendix, was distributed to all Government offices and stakeholders affected, and additional copies were available at the Workshop. The process has now entered its third phase: implementation where no conflicts arose.

Were it not for the fact that the Lake's community had already started to develop a management plan for the sustainable wise use of the Lake's natural resources without damaging the resource base, the Government, as a signatory to the Ramsar Convention, would be obliged to do so under their commitment to manage the nation's wetlands. The current Management Plan is dynamic and will change as knowledge and understanding of the issues improve. He requested the audience to identify suitable representatives in their sectors so that they could be invited to participate and through them, could understand their role and responsibilities in the implementation process. Meanwhile, the Committee will brief as many stakeholders as possible.

3.7 The most urgent need now in the planning and management process, is to fully understand the Lake's hydrology and water balance: how much water is available under different climatic and human development scenarios. Such study is under way through the MLRRWD in the WRAP Project. He urged the Government to give top priority to the study.

Mean while certain measures in the Plan can progress voluntarily . Water metering and agro-chemical auditing, monitoring of natural processes, protection of the Lake's papyrus fringe, sewage control, etc.

3.8 The Lake presents an ideal situation where a community-based management plan can be implemented. This is a unique development on world-scale. The management implementation body must be representative of all stakeholders and follow a National Wetlands Policy. He urged other sectors to follow the example of the Horticulturalists in producing sectoral codes of conduct saying that we have a duty to future generations and in any event have no choice if we don't act responsibly we will loose the market for our produce. Lord Enniskillen then invited Mr. Tomlins from the Lake Naivasha Growers Group to show some of the practical ways in which the Horticulturalists have already implemented their code of conduct, and management Plan Principles.

LNGG and the Horticultural code of Conduct, by Mr. G. Tomlins

4.0 **Using slides, Mr. Tomlins explained the horticultural industry's background around three resource types:**

1. natural resources (climate, soil, water)
2. human resources (workers and their dependants)
3. financial resources (investment)

4.1 The climate is dry enough to prevent plant diseases. The radiation is intense. The temperature rarely too cold and only occasionally too hot. There is a supply of good quality water (water quality is even better than in ~~Alsamere~~, The Netherlands). These factors produce horticultural products of a very good quality for a large and diverse market, even surpassing products from other parts of the world.

4.2 The horticultural industry employs directly some 20,000 unskilled, semi-skilled and skilled workers. Indirectly the industry provides work for 5,000 more workers. Research has revealed a ration of 8 dependants for every worker. Thus some 200,000 people depend on horticultural industry around the Lake for a regular income. The industry trains its workers and provides skill-enhancement courses. Some companies provide houses or housing allowances, water purification units and piped water, medical facilities, canteen and food, etc. Some farms offer indirect support, e.g., through sponsoring of such facilities and services.

4.3 The industry has invested heavily in physical structures (buildings, etc.), flowers and seed packing and transportation facilities, research and development, marketing, etc.: An estimated Ksh.3.5 billion has been invested by the industry around the Lake Naivasha.

The growers represented in the Lake Naivasha Growers Group (LNGG) play their community role diligently and responsibly. For instance, the LNGG has set up a forum with the Town council to handle local problems (road improvement, sinking bore holes, urban waste disposal).

As responsible industry, they stand united behind the Management Plan and have developed their own voluntary Code of Conduct that is now an integral part of the Management Plan. The

Management Plan should be implemented.

The Code of Conduct for the horticulture sector is intended as "a yard stick against which we must judge ourselves". Therefore, the LNCG has appointed a Code Conduct Manager, assisting technicians and one representative on each farm, all to sample water quality, read water meters, etc. Periodical reporting should make all procedures and events transparent. Especially since the Lake has become a Ramsar site, implementation of the Code of Conduct has become a challenge. Nowhere else in the world is a Ramsar site surrounded with a horticultural industry of this size and importance to the national economy.

4.4 He listed instances of progress pertaining to the horticultural Code of Conduct and implementation process;

1. Storage of pesticides: stores have been built to the latest specifications, such that there would be no run-off or spillage to the groundwater (spillage will remain within the building); all the growers are expected to have such stores or build them soon.
2. Protection of workers: protective clothing when applying chemicals. Overalls are washed every three days.
3. Natural control against nematodes: fallow periods of one or two years so that the marigold roots can discourage nematodes, instead of use of chemicals.
4. Soil sterilisation: using natural steam power to sterilise soil instead of chemicals.
5. Irrigation: use of overhead sprinkle irrigation is being discouraged and phased out by the large(st) growers (unless necessary) and drip irrigation is being used to put water only where it is needed.
6. Water metering: this is being standardised so that each farm will know how much water they are actually using. Larger farms use tensionmeters to measure soil humidity, hence more efficient use of lake water. In some farms rainfall is being recycled by use of gutters, etc. Dams and reservoirs are being built to catch rain and run-off water so that use of lake water is reduced.
7. Waste regulation: composting of waste is being done. This is being looked at and although not all farms are doing it, it was hoped they would start.
8. Plastics: recycling is being done - plastic is shredded and later moulded into support rods, etc., to replace bamboo.
9. Use and respect of riparian land - it is hoped to have no activity on riparian land at all.
10. Re-usable resources: Use of bamboo and other natural poles needs to be changed, and impact on the natural environment needs to be reduced by recycling.
11. Tree nursery: indigenous and exotic trees are planted each year.

12. Trees have been planted to protect the natural beauty.
13. Natural environment: game corridors have been set aside to connect the Lake with the National Parks.

4.5 Mr. Tomlins ended with an urgent request to MLRRWD and the WRAP project to finish the hydrological study of the Lake as soon as possible.

Tea Break at 11.42 a.m.

PRESENTATIONS BY SECTORS AND STAKEHOLDERS

5.0 MLRRWD, by Mr. S. P. M. Kiai

The Ministry has studied both documents (the Management Plan and the Code of Conduct) and accepts the views behind the documents. Mr. Kiai informed the Workshop that he was instructed to convey the Ministry's views to the Workshop.

1. The Ministry would want to see a basin-wide management plan, not only for the Lake and its direct environment. The Plan should cover the entire catchment because there are several stakeholders within the district whose livelihood depends on the lake. The Management Plan should be drawn in accordance with the Water Act (Cap 372), in which the power to decide on water resources are vested upon the Minister, unless otherwise delegated to a water undertaker. Mr. Kiai stated that they would like to plan together.
2. The Plan should represent all interests to eschew any conflicts among users.
3. Licensing and metered water abstraction are the prerogative of the Government. To deal with all matters that pertain to water allocation, abstraction and use, the Government established the Water Apportioning Board to which the Director of Water Development is the chief technical Advisor (cf. Water Act, Cap 372).
4. Provisions of the Water Act, particularly sections 32 and 37, are not in conflict with the Ramsar Convention's wise use principle under which the Lake is managed.
5. A comprehensive hydrological study of the Lake and its entire catchment is required to produce an accurate and reliable water budget for the area.
6. Therefore, the MLRRWD, through Phase V of WRAP, proposes to develop hydrological models for Lakes Nakuru, Elementaita and Naivasha.
7. The information from these models will guide district water resources management through development of individual District Water Plans.
8. In order to have representative models, MLRRWD intends to reach out to all the stakeholders and have consultations with the LNROA and LNGG along with other water users; their views will be as much as possible accommodated in the District Water

Resources Management Plan.

- 5.2 In view of the Ministry's position stated above be urged the implementation committee to clearly establish the enforcement procedure.

6.0 Water Resource Assessment Project (WRAP), by Mr. B. Bakker

6.1 Mr. Bakker from DHV is the Team Leader of the Water Resources Assessment Project (WRAP), a technical assistance project in the MLRRWD. Mr. Bakker spoke briefly about:

1. The WRAP Project
2. The areas where WRAP operated and operates
3. Project activities
4. The Nakuru District
5. The Lakes Naivasha, Elementaita and Nakuru hydrological models
6. Challenges

6.2 The WRAP has operated as a Dutch-Kenyan co-operation within the MLRRWD since 1981. In July 1996, the Phase V started. Phase V runs until 2000 and has a budget of a bout NLG 7 million (c. Kshs.230million). The project is based in Nairobi, but operates at the district level.

WRAP has operated or will operate in so-called ASAL (arid and semi-arid land) areas: Ndeiya-Karai, Keiyo Marakwet, Machakos, Lamu, Baringo, Laikipia, Samburu, Meru, Isiolo, Kajiado, Kilifi, Marsabit, Turkana, Nakuru. In the course of its existence, it moved its orientation from water resources development to water resources management.

Phase V activities include: water resources assessment studies, district water management plans, development of a national water resources database, water resource models (computer simulation, quantitative resources use, effects of use scenarios).

6.3 In the Nakuru District, which encompasses the three Lakes of interest, Phase V will:

1. Assess water resources at the district scale, approximately coinciding with the catchment scale.
2. Build water resource models for the Lakes Naivasha, Elementaita and Nakuru catchments, including the two large towns of Nakuru and Naivasha, using surface, river and ground water flows and abstractions.
3. Formulate a district water management plan, specifying how much surface and groundwater will be available, describing existing supplies are present and future demands, charting future developments, all within a second-economic framework.
4. Develop detail-models, for instance for Nakuru Town.

6.4 The single model for Lakes Naivasha, Elementaita and Nakuru will:

- be hydrological;

- use existing modelling software (IRAS and MODFLOW);
- need 1-1.5 years to develop.

6.5 Finally, Mr. Bakker formulated challenges:

- to obtain wide co-operation from stakeholders and services and data collection
- to acquire wide participation in data analysis and model building
- to develop realistic water development scenarios

7.0 Kenya Power Company, by Mr. M. N. Mwangi

7.1 Mr. Mwangi provided a brief overview of the geology of the area, Naivasha being part of the Naivasha Dome in the Great Rift Valley with much volcanic activity and many fumaroles. In 1981-85, the geothermal power plant at Olkaria had established about 33 deep wells, 29 of which are connected to the power plant. Steam and water for the power plant come from very deep (i.e. over 3,000m). Lake Naivasha is a shallow water body. He assured his audience that a UNDP study had proven the two water systems to be separate and no exchange occurred between the two.

7.2 KPC is a member of the LNROA because of its staff housing complex on the Lake's shores. KPC takes Lake Naivasha very serious. KPC has its own Environmental Unit. Sewage from the staff housing complex is contained and does not flow into the Lake. Water used in drilling deep wells for steam, is sub-surface water and not from the Lake, it is re-used to minimise consumption during drilling operations. It operates tree nurseries to re-vegetate abandoned wells. Excess water from the steam wells (of poor water quality and very corrosive due to its deep geological origin) is led through papyrus ponds and eventually injected back to a depth of over 900m; it appears that this practise also improves performance of adjacent wells. KPC co-operates with Oserian on sterilisation of soil using natural steam and on soil heating to increase production. Finally, it provides water to pastoralists around the plant.

7.3 KPC is willing to know how much water it can extract and to co-operate to implement the Management Plan.

8.0 Tourism industry, by Major (Rtd.) Aussie Walker (Vice chairperson KATO)

8.1 Mr. Walker apologised on behalf of the Chairperson and Chief Executive of the Kenyan Association of Tourism Organisations (KATO) who could not attend the Workshop. He congratulated those involved in putting the two documents and the workshop together with the quality of their work and with the wide representation present at this Workshop. He said the LNMP is a benchmark in the protection of the environment. The target is the environment and the community, and they both have to be kept in balance. The Lake is a key site for international tourism and its attraction depends entirely on the Lake's ecological survival.

Marketing plan and advisory services to develop the potential that exists are required. Fortunately KATO in Naivasha is young enough to stage, plan and develop in harmony with the management Plan.

8.2 The Naivasha Municipal Council can develop sources of income. The town is linked to the lake in other aspects, and it must be planned in order for the lake to survive:

- diversify tourist attractions
- upmarket stays
- safaris/bicycle hires
- scenic farms
- campsites
- hiking
- hang gliding, etc.
- falconry
- camel safaris and rides
- donkey safaris
- farm visits

8.3 He said that an association was needed in Naivasha to develop many things. It was important to sensitise even the smaller members of the community so that they can share in the development. He recommended the formation of a Lake Naivasha Tourist Association which would be used to look into the commercial aspects of the Town.

8.4 Lack of access to the lake for the local people and visitors should be looked into. He said there was need for a management plan for Naivasha to avoid "lake boys" (like beach boys and street boys in Mombasa and Nairobi respectively).

On behalf of KATO, he welcomed the LNROA, in order for them to work together.

9.0 Horticultural Crops Development Authority, by Mr. Mulandi, Managing Director

9.1 The Managing Director endorses the remarks and the presentation by the horticultural growers. He supports fully the Code of Conduct, and consequently endorses the Management Plan. He stressed the importance and urgency of tackling issues related to the catchment area and rivers as these areas are of a high potential for horticultural production and could affect the efforts being pursued in and around the Lake. It is important that they are brought into the main stream of managing the Lake and the originating waters (cf. page 14 of the Plan). He thanked KWS for bringing us together and more so for narrowing the differences between the horticultural industry and other parties from LNROA.

10.0 Fisheries Department HQ, by Ms. Jan N. Kinya

10.1 Ms. Kinya gave the Fisheries Department Director's apologies; she was instructed to represent the director at this workshop. They had studied the two documents and were happy with the initiatives taken by the LNROA and LNGG. Fisheries are at the receiving end because of the agro-chemicals that end up in the Lake, and siltation. Fish has been suffering for a long time. She noted that the Plan was largely in agreement with the Fisheries Act (Cap 3, 87). She said that:

- Landings have to be monitored; she was already co-operating with LNROA on this point;

- the Plan should shy away from introducing alien fish species;
- it is an appropriate management strategy to encourage local fishing;
- any initiative by the communities should be self-regulatory. It is not easy to control fishermen unless they have a self-regulatory approach;
- fish production should be enhanced and increased;
- additional fishing grounds should be established: they think that the one landing beach is adequate, but if it is found to be inadequate, they were ready to start another one.

10.2 She said that co-operation was required, in order to implement the Management Plan. The role of the Fisheries Department is to regulate the Lake Naivasha Fisheries. The fishing community has a crucial role to play. The Fisheries Department is not a representative of the stakeholders. They are already represented within the audience at this Workshop and she requested them to consider developing their own Code of Conduct and suggested it would cover:

- Using only fishing nets with a maximum length of 10m and a minimum mesh size of 4";
- not to fish in breeding areas as the Fisheries Act requires, that is, areas less than 4m deep and less than 100m from the papyrus fringe and in general only in gazetted areas;
- use only registered fishermen;
- sport fishing should be for leisure and not commercial; they should co-operate with the Department with regards to record keeping;
- use a valid fish trading licence that is not transferable;
- supply of statistics to the Department is compulsory;
- develop community-based management that can be held in the apprehension of anyone that disregards the above rules.

11.0 **Livestock Industry, by Ian Marshal, EcoManager, Delamere Farm**

11.1 The implementation of the management plan is the easiest to follow. Delamere Farm has taken already ecological measures that support the Plan. He suggested that KARI be asked to supply all the stakeholders with seeds to prepare their own nurseries. The buffer zone should be wide enough to act as a corridor for migration movements.

11.2 Items for discussion;

- Make sure that the management plan is monitored efficiently,
- boundaries of the relevant ranches, etc., are delineated and exactly understood well by all stakeholders.

12.0 **The Role of the National Environment Secretariat, by Mr. M'Mayi (NES)**

12.1 Established in 1974, the National Environment Secretariat (NES) is a Governmental Department in the Ministry of Environment and Natural Resources that enhances the environment and sustainable development. He was very happy with the development of the Management Plan for Lake Naivasha and with this Workshop. The Management Plan's objectives are in line with NES policies and NES priorities fit nicely in the Plan. The lake is a wetland serving a great purpose towards the development of this country. Activities carried out by NES:

- Promotion and interpretation of environmental policies, plans, programmes and projects,

etc., to ensure rational utilisation of the nation's natural resources on a wise use basis;

- Co-ordinate, initiate and formulate policies on conservation, protection and environment;
- Assess and mitigate environmental impacts of development activities;
- Promote proper land use practices;
- Monitor the nation's resource base and prepare periodic reports on the state of the environment.

12.2 NES has the following divisions:

- Human Environment Assessment Programme (HEAP)
- Environmental Impact Assessment (EIA)
- District Environment Assessment Programme (DEAP)
- Education and Information
- Pollution Control, Environmental Health and Chemical Usage and Toxins
- District Environment Protection Office (DEPO)
- Resources Management (RM)

12.3 Projects undertaken by NES: Biodiversity - UNDP sponsored database, biodiversity, awareness, wetlands to assist development of wetland awareness, provide awareness to Governments and Districts and liaise with centres of expertise in expert use, dissemination/collection of information. NES is also the secretariat to the National Wetlands Standing Committee (NWSC), one of seven sub-committees of the Inter-Ministerial Committee on Environment (IMCE).

12.4 The NWSC's objective is to develop a National Wetland Policy. Steps taken in this direction:

- definition of wetland in the Kenya context;
 - government sectoral policies relating to wetlands in Kenya;
 - NGOs contribution to policy development;
- while other steps are in the pipeline.

12.5 Recommendation:

1. Restore the defunct sewage works, and build a constructed wetland to further purify the sewage effluent;
2. Monitor the use of agro-chemicals to ensure the Lake's protection;
3. The Lake's water balance should take a centre stage;
4. With local communities, work out and establish a buffer zone of papyrus and natural vegetation around the Lake; public access should be retained to avoid conflicts.
5. Wetland have soils that differ from the surrounding dry areas. Due to fluctuating water levels, a simple contour line is not effective in delineating the ecological boundary of a wetland site. When a wetland site is being demarcated, the outlines of soil types should be followed.

13.0 Naivasha Town Development, by Mr. Mwangi (Town Clerk)

13.1 The Town Clerk extended the Mayor's apologies. He said that Naivasha town has an area of 941 Km², of which 204 Km² comprise the Lake. Naivasha has over 200,000 inhabitants and is divided into 12 electoral wards.

The Town Council supports the two documents (Management Plan and Code of Conduct). Neither documents is in conflict with the Local Government Acts.

13.2 Urbanisation has caused the Council problems, and the town needs infrastructure (roads, water, sewage treatment, garbage collection, housing, etc.). Though the town is the national 3rd in earning, the Council has failed to tap in those revenues to develop Naivasha. He called on all stakeholders to join him to build the town and make the municipality flourish.

14.0 The Chairperson Welcomed Mr. Bethwel Kiplagat to close the morning session.

14.1 Mr. Kiplagat congratulated the organisers of the workshop. He said he had a deep interest in conservation. He said that fourteen years ago, he had asked whether there was an association or group of people who were looking after this very important resource, the Lake, and was glad to hear there was.

He recalled that about four or five years ago, the group had encountered problems and gone to him for assistance due to his interest in the environment. He asked people to feel like they owned the lake, and considered it their resource and make everybody feel they are part of it.

14.2 He said KWS should develop a similar plan for other important resources, lakes, rivers, etc. in other parts of the country. If the foundation can be laid today, conflicts can be avoided. Many plans have been made. He urged the stakeholders not to involve the association in politics because if they did, they would ruin it.

Lunch Break

15.0 Elsamere Conservation Centre, by Ms. Rowena Costa-Correa

15.1 Research:

One of their researchers has worked on the lake ecosystem since 1988. She stressed a need for an independent location for research, which should be close to the Lake, e.g., Elsamere because that way they have a central organisation close to the Lake where research can take place and other organisations can get involved in. There was a need for long-term research. They have started one at Elsamere which has gone on for the last two years to monitor the population of fish eagles:

- Cycles of the plants and animals needs to be determined
- The water level cycle should also be determined
- To protect breeding areas fully
- There is need for a central area or place to be used as a data information centre which will

be open to all people. She said that Elsamere was open for them, and she said it was not necessary only for scientific, but all sorts of research.

15.2 Education:

Elsamere is in the process of making people aware of the lake problems and the ecosystem in general. This is done through training programmes, however, they form a vital link between research and education where the research findings are used to attached groups and hence promote awareness on the lake. Education should not be only isolated to the institutions as we are all part of the learning process and we can all promote learning.

16.0 Universities, by Dr. Barasa C C Wangila, Moi University

16.1 There were eight representatives from the Universities - JKUCAT, Kenyatta University, Moi University and Egerton University. They lack the opportunity to read the management plan. However, they were pleased that KWS had taken the initiative to bring all stakeholders, they would like to see an honest posturing, i.e. when they say water is being pumped out of the lake, they need meters, this is possible.

16.2 We have to be honest so that we achieve the goals and have a holistic, multi-discipline approach. He questions the feasibility of self-auditing: are we the ones to make the yard stick and measure ourselves? Or should we use other organisations, e.g., NES, Universities, etc., to measure us?

He advised the stakeholders that if they wanted to deal with common property, they had to be honest with each other.

17.0 Lake Naivasha Fishermen Co-operative Society, by T. O. Ouko, Hon. Secretary

17.1 The Society was established in 1968. The Society is not represented on the Lake Naivasha Management Implementation Committee, Mr. Ouko feels that the Society should be a member of the Implementation Committee.

17.2 Due to the fluctuation of the Lake's water level, fishermen are forced to keep changing their landing points. He said that there are no longer any landing beaches. In 1980-89, they used Delamere Farm as a landing beach, in 1991-94, they used Homegrown, and now they use Lake Naivasha Flowers. They requested that the fishermen be considered - there are about 50 legally registered fishermen; but there seem to be many illegal fishermen hiding among the farm hands. He suggested that the Management Plan include a section on fishermen landing rights. He also stated that the fishermen were sometimes charged with trespass, when it was the wind that carried their canoes and boats further than they intended to go, and asked for understanding.

17.3 He stressed again that the Society be included in the Lake Naivasha Management Implementation Committee.

18.0 Mirera Water Project, by Mr. Simon Kaniu Kariuki, Chairperson

18.1 Mr. Kariuki thanked the organisers of the workshop. He was happy because the Lake had offered many employment opportunities to Mirera residents. Since water is life, bore holes are also important as they help wananchi. He said that one time the Lake was very vast - the whole of Kihoto was part of the lake. But the Lake has now receded, and he can envisage more problems if trees were not planted. On a light note he said that if wildlife could talk, they would tell man not to push them away since man found them in the area. He asked KWS to know how to deal with the wildlife as their crops were being destroyed.

19.0 Kihoto Farmers, by John Ndungu Miringu (representing 34 farmers)

19.1 Mr. Miringu spoke on behalf of the 34 Kihoto farmers, who are all also members of the LNROA, and therefore conservationists. They are ready to protect the Lake and live with the wild animals, but they have a problem with the animals. They used to grow horticultural crops for export, and could make a living. It is sad that not even do they not export anything now; they have to buy food for their children from the market, because buffaloes have invaded their farms. All their irrigation equipment is now idle. They have gone to the Provincial Administration for help, and were referred to KWS. He said it was sad that able men and women can stay idle in their homes when they have got land to till. They would like to conserve wildlife, but not at their expense. The Chairperson of LNROA had tried to help them when they told him the problem. The Authorities killed 10 buffaloes and promised to re-locate other buffaloes, but the latter has not been done. He said that their problem was ruining the economy. As a result, their members have started sub-dividing their plots and selling land for residential buildings. In turn this creates the problem of permanent constructions in riparian land that the Chairperson of LNROA referred to earlier.

19.2 He asked the workshop, and KWS in particular, to look for a permanent solution. They cannot afford to put a fence around their farms because it would cost millions of shillings, which they do not have, so they have embarked on digging trenches.

19.3 The Deputy Director Biodiversity Conservation, Mr. Ottichillo, and the Wetlands Coordinator, Mr. Koyo, promised that they would sit with the Kihoto farmers and look for an immediate solution to the problem.

20.0 Pastoralists

20.1 They thanked the organisers of the workshop because they have never had such a meeting in this area before. The Lake does not belong to any individual. They would like to benefit from Lake Naivasha because they are Naivasha residents. Naivasha has no other source of fresh water except Malewa River, Pathways to the Lake and livestock do not affect the Lake. He stressed that the pastoralists' most pressing problem is access to fresh water for livestock. He thanked the KPC and the flower growers (Oserian, Sulmac, Homegrown) for assisting them for many years.

21.0 Kenya Wildlife Service, by Mr. A. Koyo, Wetland Coordinator

21.1 Mr. Koyo gave a summary of KWS interests in the area:

- Hell's Gate and the Corridors
- Longonot N.P.
- Lake Naivasha as a Ramsar site - KWS is a custodian of the Ramsar convention
- Wider area from biodiversity point of view, e.g. ranches, forests in the catchment
- Lake Nakuru

21.2 On the problem caused by animals, he said that KWS has a well established presence within Naivasha area. KWS has wardens based in Hell's Gate, Longonot and Naivasha Station, who are particularly charged with the responsibility of managing human-animal conflicts. The wardens are responsible for promoting partnership with stakeholders especially outside the protected areas. He assured the farmers their problem would be looked into without any delay.

21.3 He congratulated the LNROA and LNKG and all stakeholders for their initiative and effort in developing the Management Plan and code of Conduct. KWS has been part of the process but they have to give special regard to these groups because KWS only joined to support them and did not initiate or organise the process.

21.4 He said the Management Plan was in line with the KWS mission statement, i.e., biological diversity conservation (animals, plants, ecosystem) Nature Tourism and Partnerships are all in the management plan. He defined Biodiversity Conservation Strategy. The Plan supports sustainable development (farming, power generation, fisheries, tourism, etc.) which are in line with KWS goals. The Plan further creates an environment for collaboration among different stakeholders. The Plan is seen by KWS to promote conservation and development and is fully supported and pledged KWS continued participation during the implementation process.

22.0 PLENARY DISCUSSIONS

22.1 **David O. Kilo** (Lake Foods Fish dealer): Waterhyacinth, *Eichhornia crassipes*, is growing at an *alarming* rate. The weed might cause problems similar to the ones at Lake Victoria where it has forced the residents to remove the weed manually. The weed is usually found at the banks, and he requested the stakeholders to try and remove it if it appears in their side of the lake.

22.2 **Thomas Amunga** (Councillor, Naivasha Municipal Council): On the no-man's land and those who no access to the lake. Before there was access to the Lake at least every 5 Km. Today, only the poachers can get to the Lake.

22.3 **George Wamukoya** (KWS Regional Biodiversity Coordinator Rift Valley):

1. Although he has not studied thoroughly the documents, there seems the question of enforcement mechanism. The CoC audit manager cannot enforce and neither would the Implementation Committee. Also the CoC Manager would not have jurisdiction over private land property. Any subscriber to the CoC can drop out when he wants. It is important to have legislation.

2. (KWS, Fisheries, Water): overlap of jurisdiction seems a problem since each organisation wants to enforce their Act(s). We must come out very clearly on how we want to operate, how binding agreements are, what sanctions are available, all this bearing in mind the legal aspects.
3. Gum trees for revegetation are not very wise, as they extract a lot of water, and should therefore not be planted near the lake.
4. Referring to experiences at the coastal beaches, access to the Lake's shore for water is critical. All land 30m/100ft from the high water mark is Government land. Whoever fronts that beach can take care of it on behalf of the Government, but no permanent development should be done on it.

22.4 The Chairperson asked the representative of NES where we are in the legislation and co-ordination. The workshop was informed that a bill has been forwarded to the A.G.'s Chambers. The bill has 13 chapters and gives room for individuals to complain and sue, etc., to a tribunal. While waiting the Bill's passage through the legislature, management can be developed without delay.

22.5 **Dr Mucai Muchiri (Moi University):** Authority is a pertinent issue: which authority is to enforce the Plan's measures? He suggested to create a new, more powerful body above Ministries (for instance, after the Ugandan example, in the Office of the President) to be the custodian and oversee the implantation. For comparison, he noted the Regional Development Authorities largely failed because of lack of teeth, and lack of adequate law enforcement.

22.6 The key point of Lake Naivasha and its ecosystem is the question of allocation. Who guides what and how much, e.g., the pastoralists had access to the lake before, but now they do not; fishermen - how much of what does one take. The lake is our common resource and property and we have to think about conserving it and exercise an amount of husbandry.

22.7 The Chairperson invited NES to give its views on the idea of a more powerful body. NES informed the workshop that the consultants will go through all the institutions to see which institution can do what, and come up with options which will now be discussed in another workshop. The options will decide which is the most competent body, Department or Authority to handle the issue.

22.8 **Someone** argued that when things go into committees and groups, things take ages. If the stakeholders are not able to take care of themselves, they were bound to fail. The Growers have made their own plan for improving the lake environment without duly predating on their profit margin. They should be let to police themselves and if this did not work, only then would the committee come back to the drawing board and come up with something else.

22.9 **Mr B Kiplagat** said the stakeholders must be very careful so that they do not look for access to the lake, and in the process help people to get land on the lake.

30.0 Mr L Oltetia (Desert Flow) talked on:

1. **authority** - there are many authorities, Acts and players, but the real problem is not a matter of authority, but lack of co-ordination and responsibility. Too many isolated actors overlap in their working. There should be legislation, which is not in place. He suggested that next time there was a seminar or workshop, some legislators should be invited to lobby for legislation.
2. **access** - absolutely essential for animals and human beings. Access for animals should be restricted because, depending on the population, the lake might suffer pollution and erosion. There should however be no restriction for human beings. He suggested that there be an open corridor within the lake perimeter and also between the farms around the lake or a way through the farms.
3. **chemicals** - the farms around the lake use agro-chemicals. They may think they are doing this without allowing the chemical to get to the lake on the surface, but it is known that after long usage, there will be a lot of concentration of the chemicals in the ground water and this will seep into the lake. Safer chemicals should be used.
4. **water abstraction permits** - permits are given for fixed amounts - even when that may exhaust the resources base. If the last drop was drawn and if it is within the legal limit, does this mean there is no legal or ecological problem? He suggested that the water permit be on annual basis, based on the water budget. While waiting for hydrological study, we should put a hold to any additional activities on anything to do with the lake. KPC assured us that their studies indicate geothermal plant is hydrologically isolated from the lake, but may be in 50 years new studies may reveal other insights. It was important to get an independent study to tell the source of the hot water in the geothermal plant.

31.0 A KARI representative - Research has indicated that DDT persists in the lake for a long time. Therefore, some pesticide residues may not be attributable to recent agricultural or horticultural use. He suggested that pesticides on the CoC' list of banned formulas be reviewed constantly because of new insights. He said that access pathways may become venues for more pollutants getting into the lake.

31.1 Mr J Kairu (Moi University):

1. **Boundaries:** is there a policy to say where a permanent boundary is? For instance, in Lake Victoria the lake boundary was there but it is not enforced. Farmers follow the lake every time it recedes. De facto, there is no fixed boundary.
2. **Use of land** - Lake Victoria resident riparian land owners charge the public and lake users to pass through. He suggested that land users be part and parcel of the planning process.
3. **Environmental Impact Assessment** should be done. This can then be followed up in the audit.

31.2 Mr Macharia of Environmental Assessment Unit (Fisheries) said that the issue should be looked at from a holistic perspective. He also complemented the organisers of the Workshop.

31.3 Mrs J Kinya (Fisheries) announced that the Director of Fisheries requests anybody who can assist to come forward and then be designated as an authorised officer.

31.4 Mr Ndeti (KWS): On purification of the lake: it was not clear whether the current activities taking place in the area will be abandoned now or when, i.e., there is no time frame. The Management Plan should cover the entire catchment area. He noticed that some Acts seem to conflict, e.g., the Forestry, Land Settlement and Water Acts.

31.5 Mr G Tomlins (LNGG)

1. Referring to the comment by Mr. Wamukoya on the use of Gum Trees using excessive water, Mr. Tomlins pointed out that Gum trees were not planted in the lake basin but in plantations elsewhere in the country. These Gum trees provided wood for greenhouse structures of some Horticultural Companies, he apologised if his slide presentation had misled people into thinking they were planted within the basin.
2. On policing of the Management Plan and Code of Conduct, he said it was important to note that the plan exists. Let's give this self-policing approach a chance. The growers themselves are in the best position to know what is going on day-by-day on the farms. Failing that, the next step will be legislation. He said they welcomed outside views because they want to make sure that the natural resources of the lake are restored.
3. He pointed out that the growers have customers who are increasingly critically interested in the way they farm; customers are not interested in buying from irresponsible flower companies.
4. He said the growers eagerly awaited the hydrological study.
5. He confirmed that the list of chemicals used will be reviewed at least on an annual basis, and where possible, alternatives that are non-chemical will be used.
6. He said the growers have addressed the lake boundary issue in the CoC, and they would limit their cultivation to 50 m where papyrus exists and where there is none, 100 m from the lake. Beacons or identifiable structures are being fixed to show the limit of cultivation for once and for all.

31.6 Somebody suggested that the stakeholders stop talking and consider adopting the Management Plan document, and now move forward to the stage of implementation.

**LAKE NAIVASHA MANAGEMENT IMPLEMENTATION COMMITTEE
STAKEHOLDERS WORKSHOP**

Kenya Wildlife Service Training Institute, 8 October, 1996

PROGRAMME

0800-0845	Arrivals and Registration	
0845-0900	Introduction	Chairperson
0900-0915	Workshop Objectives	Chairperson
0915-0955	Overview Management	LNROA
0955-1030	Coffee/Tea Break	
Responses:	How the Management Plan relates to:	
1030-1040	Provincial Administration	D.O.Naivasha
1040-1050	Water Development	MLRRWD
1050-1100	Wildlife Conservation	KWS
1100-1110	Power Generation	KPC
1110-1120	Tourism & Hotel Industry	Hotelier, KATO
1120-1130	Horticultural Industry	HCDA & Growers
1130-1140	Fisheries Resources	Fisheries Department
1140-1150	Livestock Industry	Pastoralist/Rancher
1150-1200	Water Resources Assessment	Bob Bakker, WRAP
1200-1210	Environmental Protection	NEAP/NES
1210-1220	Naivasha Town Development	Town Clerk
1220-1230	Education & Research	Elsamere Centre
1230-1240	Universities	Moi & Egerton Universities
1240-1400	Lunch Break	
1400-1500	Plenary discussions: Role of Stakeholders in Management Implementation Process	Chairperson
1500-1530	Coffee/Tea Break	
1530-1630	Plenary discussions: Recommendations & Resolutions	Chairperson
1600-1615	Closure of the Workshop	Prof. Koech, NEAP

**LAKE NAIVASHA MANAGEMENT IMPLEMENTATION COMMITTEE
STAKEHOLDERS WORKSHOP**

Kenya Wildlife Service Training Institute, 8 October, 1996

OBJECTIVES

1. Explain the ecological and economic importance of Lake Naivasha
2. Present an overview of the Management Plan and the Horticultural Code of Conduct
3. Provide information, education and awareness of the stakeholders
4. Identify roles and responsibilities of stakeholders
5. Establish a participatory approach to the Management Implementation Process among all the stakeholders
6. Answer questions and address concerns of the stakeholders on conservation and development issues.
7. To draw conclusions and forward recommendations to the Government.

**LAKE NAIVASHA MANAGEMENT IMPLEMENTATION COMMITTEE
STAKEHOLDERS WORKSHOP**

Kenya Wildlife Service Training Institute, 8 October, 1996

INVITEES

<u>NAME</u>	<u>POSITIONS/ORGANISATION</u>
1. Mr. Walter Kilele	Managing Director, ADC
2. Mr. Sam Mwaura	Chairperson, KATO
3. Col.(Rtd) J. N. Nguru	Executive Officer, KATO
4. Major A. W. Walker	Vice Chairperson, KATO
5. Mr. Jagi Gakunju	Chairperson, Uvumbuzi Wildlife Clubs
6. Mr. J. Small	Managing Director, Block Hotels
7. Mr. D. R. Kamau	Executive Officer, Kenya HotelKeepers Association
8. Mr. Peter Mbugua	Chairperson, Kenya HotelKeepers Association
9. Mr. Gilbert Kibata	Crop Protection Officer, KARI
10. Mr. M.A.S. Mulandi	Managing Director, HCDA
11. Mr. Bethuel Kiplagat	
12. Mr. F. G. Maina	Chairperson, Kedong Ranch
13. Mr. P. N. Njiru	Hydrologist
14. Mr. Gilbert Okeyo	Fisherman, Naivasha
15. Mr. Tom Okinda	Fisherman, Naivasha
16. Mr. Absolom Anunda	Fisherman Naivasha
17. Mr. K Oluande	Fishmonger
18. Mr. Elijah Awiti	Fishmonger
19. Mr. Gudo Olang	Fishmonger
20. Ms. Julie Okeyo	Fishmonger
21. Mr. Richard Mugwe	Fishmonger
22. Ms. Grace Alacho	Fishmonger
23. Mr. Francis Malenge	Fishmonger
24. Ms. Loise Muchura	Fishmonger
25. Ms. Leonida Abonyo	Fishmonger
26. Mr. Stanley Mungai	Fisheries, Naivasha
27. Mr. James Buluma	Fisheries, Naivasha
28. Mr. Pharis Ndungu Chege	Councillor, Naivasha Municipal Council
29. Mr. Michael K. A. Mutai	Councillor, Naivasha Municipal Council
30. Mr. Samuel Waweru	Councillor, Naivasha Municipal Council
31. Mr. Julius Nganga Marite	Councillor, Naivasha Municipal Council
32. Mr. Gachoka Mwaniki	Councillor, Naivasha Municipal Council
33. Mr. Michael Musyoki	Councillor, Naivasha Municipal Council
34. Mr. Samuel Rakua Kimamia	Councillor, Naivasha Municipal Council
35. Mr. Kimwana Waweru	Councillor, Naivasha Municipal Council
36. Mr. Onesmus Karanja	Councillor, Naivasha Municipal Council
37. Mr. Simon Mwangi Njuguna	Councillor, Naivasha Municipal Council

38.	Mr. Duncan Irungu Mugi	Councillor, Naivasha Municipal Council
39.	Mr. Francis Githii Nganga	Councillor, Naivasha Municipal Council
40.	Mr. Samson Nkanata	Councillor, Naivasha Municipal Council
41.	Mr. James Kahora Kuria	Councillor, Naivasha Municipal Council
42.	Mr. Thomas Amunga	Councillor, Naivasha Municipal Council
43.	Mr. Geoffrey M. Mwangi	Councillor, Naivasha Municipal Council
44.	Mr. Peter M. Gathimba	Councillor, Naivasha Municipal Council
45.	Mr. J.M. Mwangi	Councillor, Naivasha Municipal Council
46.	Mr. J. K. Kiriga	Councillor, Naivasha Municipal Council
47.	Mr. G. M. Mwangi	Town Clerk, Naivasha
48.	Mr. J. M. Mwangi	Draughtsman Surveyor
49.	Mr. Burch;s Mariner	Fishing Club, Naivasha
50.	Dr. Jr Winima Janes	Sport Fisherman
51.	Mr. Samwel Muchiri	Sport Fisherman
52.	Dr. Gideon Motelin	Egerton University
53.	Mr. Jim Kairu	Moi University
54.	District Env. Officer	Nakuru District
55.	WWF	Nakuru District
56.	KENGO	Nakuru District
57.	Pollution Control Officer	KWS Nakuru
58.	Mr. Japheth K. Mutai	MLRRWD, Nakuru
59.	Miss Wanjiku Nganga	MLRRWD, Nakuru
60.	District Env. Prot. Officer	MLRRWD, Nakuru
61.	Mr. Simon Kaniu Kariuki	MLRRWD, Nakuru
62.	Mr. Hiram Ndirangu Nganga	"
63.	Dept. of Natural Resources	Egerton University
64.	Mr. Derek Dames	
65.	Mr. M H. Khan	General Manager, Safariland Club Ltd
66.	Mr. F. Kariuki	ADF (RVP) Fisheries Dept., Naivasha
67.	Ms. N. R. Kagau	Fisheries Dept., Naivasha
68.	Mr. Kiarie Kahareri	Fisheries Dept. Naivasha
69.	Mr. Rodrick Kundu	Fisheries Dept., Naivasha
70.	Mr. Jasper Oluoch	Fisheries Dept., Naivasha
71.	Dr. Barasa Wangila	Moi University
72.	Dr. Mucai Muchiri	Moi Univesity
73.	Mr. Emmanuel Azaratto	Malu Fishing Club
74.	Mr. Tommy Carlley	
75.	Mr. S. P. M. Kiai	MLRRWD
76.	Mr. C K. Gichaga	MLRRWD
77.	Mr. P. G. Njuru	MLRRWD
78.	Prof. Michael Koech	NEAP Secretariat
79.	Mr. Jacob Ojuok	KMFRI
80.	Mr. Paul Obade	KMFRI
81.	Mr. George Morara	KMFRI
82.	Mr. Lucas Oluoch	KMFRI
83.	Mr. Samuel Opiyo	KMFRI
84.	Mr. Mbogo Kamau	KMFRI

85.	Mr. Maurice O. Achar	KMFRI
86.	Mr. Richard Opiyo	KMFRI
87.	Mr. Tom Nyolo	KMFRI
88.	Njine J. M.	Morendat Estate
89.	Kenya Nut Co.	Morendat Estate
90.	Director	Government Farm
91.	Marshalian	Manera Farm
92.	Abdulla	Lake Flowers Ltd
93.	Muiru Jackson Gachie	Kihoto Farm
94.	Saraja Phillip Kruswe	Kihoto Farm
95.	Kamau Waweru	Kihoto Farm
96.	Gitomba David Njau	Kihoto Farm
97.	Miringu John Ndungu	Kihoto Farm
98.	Nganga Joyce Wangari	Kihoto Farm
99.	Gichuhi Muchiri	Kihoto Farm
100.	Muthoni Tirisha	Kihoto Farm
101.	Kamau Joseph Gakunga	Kihoto Farm
102.	Karenju Appolo Kiiru	Kihoto Farm
103.	Wachiuru Stanley Ndegwa	Kihoto Farm
104.	Muturi Moses Kioi	Kihoto Farm
105.	Nganga Francis Githii	Kihoto Farm
106.	Mwaura Samuel Ngigi	Kihoto Farm
107.	Mrs Gugia Mwangi	Kihoto Farm
108.	Kariuki Mwaniki	Kihoto Farm
109.	Chege David Njuguna	Kihoto Farm
110.	Mutitu Karanja	Kihoto Farm
111.	Gachanja Ruth Wanjiku	Kihoto Farm
112.	Mathanyu Joseph Gathiari	Kihoto Farm
113.	Kabue Kiarie	Kihoto Farm
114.	Makumi Livingstone Gituni	Kihoto Farm
115.	Wanyoike Paul Gatere	Kihoto Farm
116.	Thiongo Njuguna	Kihoto Farm
117.	Kinyanjui Gitara	Kihoto Farm
118.	Kimanja Kamau	Kihoto Farm
119.	Zabidah	Kihoto Farm
120.	Kanini Joseph Gatharia	Kihoto Farm
121.	Rugu Mbugua	Kihoto Farm
122.	Kungu Nahashon Mwangi	Kihoto Farm
123.	Kigecha Keffa Z	Kihoto Farm
124.	Karoko Lizzie Wambui	Kihoto Farm
125.	Kiplangat Hose	Pineapples Edge Ltd
126.	Mr. & Mrs Alessandro Sozzi	
127.	Minchio Claudio	Aberdare Estates
128.	Mrs Jean Knight (Manager)	Wetam Investments
129.	Maguku Wambui Rose	
130.	Kagutha Mwangi	
131.	Githere John Richard	

132.	Mrs Joyce Waiganjo	Boffar Frm
133.	Bell W. Dykes June	Jackman Farm
134.	Stephenson Eric	Bees Garden
135.	Gichuru Samuel	Lake Naivasha Holiday Villas
136.	Gateri James Mwangi	Danhill Farm
137.	Burch John	Lake Crops
138.	Schrupbach Hans	Hortitec (K) Ltd
139.	Gathinji Ndungu	
140.	Vaughan John	
141.	Ngaruro C. M. Gitahi	Mbegu Farm
142.	Yarinakis Nassos	Mbegu Farm
143.	Amoroso John	Pepino Farm
144.	Campbell Clause Bill	Next Year Farm
145.	Elfezouaty Igal	Indu Farm
146.	Bengough Chuck	Lucita Farm
147.	The Manager	Lake Naivasha Country Club
148.	Higgins Mike	Kijabe Ltd.
149.	Bisletti Marchesa Sieuwke	Bushy Island
150.	Gaymer Barry	Crescent Island
151.	Shepherd Peter	Estate Leasing
152.	Dolier Guy	Endebess Estates
153.	Erskine Francis	Sanctuary Farm
154.	Mutahi Francis/Kanyotu J	Kamuta Ltd
155.	Boru Kageche E	Mwanyaka Farm
156.	Coulson Terry	Osirua Ltd
157.	D'Oliiep John	Lake Naivasha Vine Yards
158.	Mwangi Wilson	Nyakio Gen. Contractors
159.	The Manager	Safariland Club
160.	Block Tubby	Longreach Dev. Ltd
161.	Harris Charles	Longreach Dev. Ltd
162.	Root Joan	Kilimandege
163.	Bunny Diana	
165.	Barton Oliver	Kipabungi Ltd
166.	Gitaka Kimani	
167.	Mutuku Richard	YMCA
168.	Waithaka J. N.	Kimwatu Farm
169.	Mrs Serah Nyambura	
170.	Fairburn Richard	Sulmac
171.	Owles John	Shelimar
172.	Mrs Millicent Morsen	Wagon Wheel
173.	Mr & Mrs Mervin Carnelly	Fisherman's Camp
174.	Wagichiengo Karanja	Fish Eagle Inn
175.	Munn Grant	Goldsmith Seeds Ltd
176.	Njonjo charles	
177.	Hussein Akbar	
178.	Manager, ADC Farm	Ndabibi Estate
179.	Mott Jeremy	

180.	Kennaway Tony & Joey	
181.	Walker F. Ewart	
182.	Dr. Geoffrey Irvine	Lakeside
183.	Karugu James Boro	Kinja Nurseries
184.	Winzenreid Margaretha	
185.	Cunningham Reid Michael	Waciuma Invest. Ltd.
186.	Long Robin	Nderit Estate
187.	Barton John	Ololerai Farm
188.	Lury Yvonne	Crater Lake Sanctuary
189.	Luchhurst Adrian	Lentolia
190.	Dr. David Silvesten	Ole Normani
191.	Jon Cavanagh	Rima Island
192.	Jackson Kamau	Korongo Ltd.
193.	Joseph Mugwe	Olsuswa Farm
194.	Oria & Iain Douglas H.	DDD
195.	Nganga Jonah S	North Lake Nurseries
196.	Low Peter	Maradju
197.	Smith Alwyn	
198.	Archer Chris	
199.	Hopcraft Rich	Loldia
200.	Mwangi Peter J. K.	Nyanjugu Inv. Farm
201.	Villa Mario	Brixia Ltd
202.	Rne Pale	Green Park
203.	Muhu Joseph Kangari	Kangari Estate
204.	Lovatelli Paulo	Marula Estate
205.	Wanyange Hon. F. J.	MP
206.	Azzaretto Emmanuel	Malu Fishing Camp
207.	Church Tony	Longonot Game Ranch
208.	Bellingeri Cesare	Kingazi
209.	Brighetti Marco	Kongoni Farm
210.	Simpson Mr. & Mrs Angus	
211.	Neylan Mr. & Mrs Pat	
212.	Shaw Mr. & Mrs Dan	Lakeside House
213.	Dames Mr. & Mrs Derek	
214.	Maina Francis G (Chairperson)	Kendong Ranch
215.	Opiyo Henry Obut	Water Bailiff

**LAKE NAIVASHA MANAGEMENT IMPLEMENTATION COMMITTEE
STAKEHOLDERS WORKSHOP**

Kenya Wildlife Service Training Institute, 8 October, 1996

PARTICIPANTS

<u>NAME</u>	<u>ORGANISATION</u>
1. Nick Graham	Block Hotels Ltd
2. Palle Rune	Shalimar Flowers/Green Park
3. John Owles	Shalimar Flowers
4. Ian Marshall	Delamere Estates
5. M. H. Khan	Safariland Club
6. Velia Carn	Elsamere
7. Rowena Costa-Correa	Elsamere
8. Frans Born	Sher Agency
9. J. A. Juma	Sulmac
10. Catherine Wanjiku	Oserian
11. Jagi Gakunju	Uvumbuzi
12. Lerai Oltetia	Desert Flow, Box 11699, Nairobi
13. James Mwangi Njee	KPLC
14. Njangi Munene	Uvumbuzi
15. Richard Opiyo	KMFRI
16. Samuel Ndegwa	Fisheries
17. Simon Gitau	KWS Hqs
18. Bob Bakker	MLRRWD & WRAP
19. Dr. M. Kimotho	Veterinary Officer, Naivasha
20. J. N. Oluoch	Fisheries Department, Naivasha
21. Bertl Stephenson	Bee's Garden Farm
22. F. G. Maina	Kedong Ranch, Box 44463, Nairobi
23. Mr. R. W. Githua	Director of Physical Planning, Nairobi
24. Ezekiel K Kariuki	Fisheries Department - Rift Valley Province
25. Nancy R. Kagau	District Fisheries Department - Rift Valley
26. Paul Obade	KMFRI
27. Rodrick Kundu	Fisheries Dept.
28. William Murai	Kekopey Wildlife Management Project
29. Mwangi Kabaria	Kekopey Wildlife Management Project
30. Francis Ngumo	Heyofia Project
31. Nicholas Muthama	Heyofia Project
32. Alfonzo Matingi	Mathara Holdings Ltd
33. David Oduol Kilo	Lake Foods (Fish Dealers)
34. Eric Achienga Ndonga	KWSTI
35. Aluoch Lucas	KMFRI
36. D. K. Mbogo	KMFRI
37. Joyce Waiganjo	Boffar Ltd

38.	Bethuel A. Kiplagat	
39.	Morara George	KMFRI
40.	Samuel Opiyo	KMFRI
41.	Maurice Jumba	Hy-Q, Nairobi
42.	Abysolom Anunda	Hy-Q, Naivasha
43.	G. M. Mwangi	Town Clerk, Naivasha
45.	Geoffrey Irvine	Private
46.	Joan Root	Riparian Owner & Conservationist
47.	James Kiriga	Chief Engineer, Naivasha Municipal Council
48.	J. M Mwangi	Naivasha Municipal Council
49.	John Ndungu Miringu	Kihoto Farm
50.	Japheth Mutai	National Water Coproration
51.	C. K. Gichaga	MLR,R&WD, Nakuru
52.	Mrs Bancy Chege	MLR,R&WD, Nakuru
53.	Peter G. Njuru	MLR,R&WD, Nakuru
54.	F I Mutahi	Kamuta Limited, Naivasha
55.	J. M. Njine	Kenya Nut Co.
56.	Joshua Ouko	Fisherman, Lake Naivasha
57.	K. Beckor	Kenya Nut Co.
58.	Lawrence Okeilo	Lake Naivasha, Fishermen Co-oper. Society
59.	Tom C. O. Ouko	Lake Naivasha, Fishermen Co-oper. Society
60.	Anne Kahihia	KWS, Naivasha
61.	Lord Andrew & Sarah Enniskillen	LNROA
62.	Tom O Nyolo	KMFRI, Naivasha
63.	Sarah Higgins	LNROA
64.	J F Campbell Clause	Riparian Owner
65.	Henry Mwithaga	Lake Naivasha Country Club
66.	Bas van Helvoort	KWSTI/WC & TP
67.	P M. Low	Maraaju Ltd., Naivasha - LNROA
68.	J Simpson	Box 411, Naivasha
69.	Rick & Bette Hopcraft	Loldia Ltd
70.	Chris Archer	Architect, Box 763, Naivasha
71.	R. J. Thampy	WWF, Nakuru
72.	G. N. Kabata	KARI, Nairobi
73.	J. K. Kamere	Nairobi
74.	J. K. Kenduiwa	HCDA, Box 42601, Nairobi
75.	H. O. Opiyo	Water Development, Naivasha
76.	Claudion Minchio	Aberdare Estates Ltd.
77.	Isaac M. Mahiga	Kedong Ranch Ltd
78.	Phillip K Saraja	Box 1150, Naivasha
79.	Samuel Muchiri	Sport Fisherman, Naivasha
80.	Major Aussie Walker	Vice Chairperson, KATO
81.	Isaac Kariuki	KATO
82.	Cllr. Samson Mwinigi	Naivasha Municipal Council
83.	Cllr. Francis Githii	Naivasha Municipal Council
84.	J. Gachie Muiru	Kihoto Farmer

85.	J. Kinyanjui	Kihoto Farmer
86.	Peninah Aloo-Obudho	Kenyatta University
87.	Jane N. Kinya	Fisheries Department Hqs
88.	M. Carnelly	Fisherman's Camp
89.	John Olang	Lake Naivasha Co-op. Society
90.	Nahashon N. Sindiyo	Lucky Farm - Lake Naivasha
91.	James Igamba	Divisional Water Officer - Naivasha
92.	Barasa C C Wangila	Moi University
93.	Stephen Macharia	Naivasha Fisheries
94.	Mucaï Muchiri	Moi University
95.	Jim K. Kairu	Moi University
96.	Mohammed B. Dhidha	Wetland Programme, KWS Hqs
97.	George Wamukoya	KWS
98.	Bernard Kaaria	KWS
99.	Martin Mwangi	KPC
100.	P. K. Sitienei	KARI, Naivasha
101.	Jack-Couffer	Riparian Owner
102.	Dr. G. Motelin	Egerton University
103.	Mr. Musa K. Amsei	Moi University
104.	Joel K. Gatune	Box 674, Naivasha
105.	Elija A. Awiti	Box 847, Naivasha
106.	L. Kisoyan	KWS
107.	R. Ndetei	KWS
108.	Rufox	Homegrown
109.	Kiarie Nganga	Naivasha
110.	Julia Okeyo	Box 224, Naivasha
111.	Esther Anyango	Box 224, Naivasha
112.	Loyce Omondi	Box 61, Naivasha
113.	Grace Alacho	Box 224, Naivasha
114.	Samuel Waititu	Box 870, Naivasha
115.	Wellington Muli	Box 473, Naivasha (Forester)
116.	Simon Kaniu	Mirera, Naivasha
117.	H. N. Nganga	Mirera, Naivasha
118.	Dr. K. S. Makhanu	JKUAT
119.	Mr. C C Kamau	JKUAT
120.	Joseph Ogula	Fisherman
121.	Martin Mulandi	HCDA, Box 42601, Nairobi
122.	M. W. Nderitu	HCDA, Box 42601, Nairobi
123.	Richard Ole Nkongoni	Asst. Chief Kipkonyo
124.	Daniel Kamamia	Chief Ndabibi Location
125.	S. P. Kiai	MLR, R & WD, Box 30521, Nairobi
126.	Peterson N. Njiru	MLR, R & WD, Box 30521, Nairobi
127.	Cllr. Thomas amunga	Hell's Gate Warden, Box 905, Naivasha
128.	John D'Olier	Vineyards
129.	Titus Mutiso	KWS Hqs
130.	Dr. Kit Barrow	Homegrown
131.	H. K. Muhindi	KWS, Naivasha

- | | | |
|------|--------------------|---|
| 132. | F. Kagema | National Museums of Kenya |
| 133. | Patrick M'Mayi | National Environmental Secretariat |
| 134. | Mugera | National Environmental Secretariat |
| 135. | John N. Mwathi | Transporter, Box 12838, Nakuru |
| 136. | R. N. Mogire | M. L. S. Nairobi |
| 137. | Wambugu Thuo | KENGO, Box 1237, Nakuru |
| 138. | L. N. Githinji | District Provincial Officer |
| 139. | L. K. Mwadime | Social Development Officer |
| 140. | Richard Aiyabei | ADC Ndabibi, Box 106, Naivasha |
| 141. | Gilbert Okeyo | Lake Naivasha Fishermen |
| 142. | Samson Lwili | KARI, Box 30148, Nairobi |
| 143. | Daniel Mutisya | KARI, Box 30148, Nairobi |
| 144. | Daniel M. Nzingya | School for Environmental Studies, Moi University, Box
3900, ELDORET. |
| 145. | Francis U. Malege | Naivasha |
| 146. | Vincent Otieno | Naivasha |
| 147. | Esther Mwangi | Kenya News Agency |
| 148. | Kariuki Kamau | East African Standard |
| 149. | Hassan K. Narankai | Chief |
| 150. | Daniel Muntet | Moi-Ndabi |
| 151. | Joseph Ole Shukuru | Longonot |
| 152. | Ntiati Ole Morioi | |
| 153. | Njugu Kibso | |
| 154. | Sospeter Muigai | Nation Newspapers |
| 155. | Njoroge Kinuthia | Standard Newspapers |
| 156. | Wishitemi | Principal, KWSTI |
| 157. | Jane Mwangi | KWSTI |
| 158. | F. Litondo | KWSTI |
| 159. | I Abiya | KWSTI |
| 160. | Anderson Koyo | KWS Hqs |
| 161. | W. Ottichillo | KWS Hqs |
| 162. | Circa 50 Drivers | |