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# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.*

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**1. Date this sheet was completed/updated:**

1<sup>st</sup> August 2001

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Designation date

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Site Reference Number

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**2. Country:**

Republic of Kenya

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**3. Name of wetland:**

Lake Baringo

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**4. Geographical coordinates:**

Longitude **36° 00' – 36° 10' E**  
Latitude **0° 30' – 0° 34' N**

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**5. Elevation:** (average and/or max. & min.)

Average **965** meters above sea level.

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**6. Total Area of Wetland 31,469ha (Lake water body 16,662 ha + Riparian zone 14,807 ha)**

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**7. Overview:** (general summary, in two or three sentences, of the wetland's principal characteristics)

Baringo is one of the two important fresh water lakes in the Kenyan Rift valley that is primarily arid in nature. It is part of the Great Rift Valley system consisting of faults and cliffs. It is hydrologically inundated by several fresh water inflows from the Mau and Tugen hills. Ecologically, the lake constitutes a critical habitat and refuge for more than 500 avifaunal species. Some of the migratory waterbird species are of regional and global conservation significance. The lake is an invaluable habitat for seven fresh water fish species of which one (*Oreochromis alcalicus baringoensis*) is endemic to the lake. Local fisheries are particularly important towards sustainable socio-economic development of the communities. In addition it is a habitat for many species of animals such as Hippopotamus (*Hippopotamus amphibious*), Crocodile (*Crocodylus niloticus*) and a wide range of mammals, amphibians, reptiles and the invertebrate communities. Its has high natural and cultural attractions that contribute immensely towards eco- tourism development in the region.

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**8. Wetland Type** (please circle the applicable codes for wetland types; in the present document, the "Ramsar Classification System for Wetland Type" is found on page 9)

Inland:

M

O

Tp

Ts

Please now rank these wetland types by listing them from the most to the least dominant:

**Ranking**

1. O

2. Tp

3. M

4. Ts

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**9. Ramsar Criteria:** (please circle the applicable Criteria; the *Criteria for Identifying Wetlands of International Importance* are reprinted beginning on page 11 of this document.)

1

2

3

4

5

7

Please specify the most significant criterion applicable to the site: 7

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**10. Map of site included? Please tick *yes*  -or- *no***

(Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map traits).

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**11. Name and address of the compiler of this form:**

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*Please provide additional information on each of the following categories by attaching extra pages (please limit extra pages to no more than 10):*

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**12. Justification of the criteria selected under point 9, on previous page.** (Please refer to the *Criteria for Identifying Wetlands of International Importance* appended to this document)

*Criteria 1: A wetland should be considered internationally important if contains a representative, rare or unique example of a natural or near-natural wetland type found*

*within the appropriate bio-geographical region.*

Lake Baringo is located in an arid zone and it is an important source of water (unlike other Rift Valley lakes that are alkaline saline) for domestic use and livestock production. Rivers Molo and Perkerra, which drain into Lake Baringo have their catchment in Mau escarpment and Tugen hills to the west and Laikipia escarpment to the east respectively. They cut through the Marigat/ Lobo plains on the way to lake Baringo. They are reliable permanent rivers with a large volume of water. The seasonal rivers include Dau, Mugurn, Araben and Wasenges, which have dissolved substances of heavy metals such as potassium, magnesium, sulphate and chlorine. These rivers play a major role in the biological and physical-chemical characteristics of lake Baringo. The rivers support a lot of biodiversity and many ecological functions in the lake, which are very important locally and nationally. The lake has an area of 16,662 ha and a maximum depth of 8m. The depth has been decreasing over the years due to reduced precipitation and heavy siltation. The lake is fresh with a Ph of 8.0-9.0, which varies from one season. The sources of water for the lake include precipitation, rivers and underground seepage.

*Criteria 2: A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.*

Lake Baringo is an important habitat for the endangered/endemic. *Labeo cylindricus* is endangered, *Barbus* is threatened and *Oreochromis niloticus baringoensis*, is endemic to this lake. This fish species is of potential economic value and currently it is utilized on a very limited scale for food. The fish species is found only in lake Baringo and nowhere else in Kenya.

The lake also has a number of regionally threatened species also occur in this lake and include: Great crested grebe, African darter, Great egret, Saddle-billed stork, White backed duck, White headed vulture, Martial eagle, Baillon's crake and African skimmer (see appendix).

*Criteria 3: A wetland should be considered internationally important if it supports population of plant and/ or animal species important for maintaining the biological diversity of a particular biogeographic region.*

Lake Baringo has high avifauna diversity including globally important species such as Lesser Kestrel, Lesser flamingo, Madagascar squacco heron and the Pallid harrier. More than 500 species of avifauna have been recorded in the area. Large diversity of mammalian species i.e. hippopotamus, reptiles like crocodiles, amphibians and invertebrates are also on the lake.

*Criteria 4: A wetland should be considered internationally important if it supports plant and/ or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.*

The Ol'Kokwe Island on the lake is an important breeding habitat for Goliath herons. It is a stopover and a wintering ground for palaeartic migrants.

*Criteria 5: It regularly supports 20,000 waterfowl.*

Lake Baringo is an important bird area having recorded over 470 species of birds, including significant numbers of migratory species. It is of great ornithological importance as it has over 20,000 water birds throughout the year.

*Criteria 7: It supports significant proportion of indigenous fish subspecies, species or families, life history stages, species interactions and /or population that are representative of wetland benefits and /or values and thereby contribute to global biological diversity.*

Lake Baringo is an important habitat for seven species of fish, which are very critical for sustainable fisheries and socio-economic development of the local communities. Tilapia, an indigenous species dominates the catch followed closely by Protopterus, which is an exotic species. The fisheries of this lake contribute significantly to eco-tourism development through sport fishing practices (see appendix).

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**13. General location:** (include the nearest large town and its administrative region)

**General location:** (include the nearest large town and *its* administrative region)

Lake Baringo is located in Baringo district of Rift Valley Province in Kenya. It is about 150 km north of Nakuru town, and about 300 km north of Nairobi, the capital of Kenya. The nearest town to the lake is Kampi ya Samaki, which is a small settlement on the western shore of the lake. The geographical coordinates of the lake has been shown above.

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**14 Physical features:** (e.g., geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate)

### **Geomorphology**

Lake Baringo has a sub-rectangular morphology with a length of 21km, width of 13 km and a surface area of 168km<sup>2</sup>. To the West the sub-rectangular morphology is bordered by the sub-meridian fault, which affects the concentration of trachytes in the lake. On the eastern side there is a fault on the base of Laikipia escarpment. Contrary to Lake Bogoria, Lake Baringo is divided into lower basins; it has several islands, which is bordered by a meridian fault. The central island of Ol Kokwe represents the remains of a small volcano. The lake has a regular shoreline apart from the northern shores which has gaps of rugged terrain. It has no surface outflow, although it has been documented that there is underground connection to some natural springs 50km away.

## **Origin**

It is part of the formation of the Gregory Rift Valley .

## **Hydrology**

Lake Baringo and Bogoria catchment extends close to the structural limit of the half graben of the lake. The area is about 6905km<sup>2</sup> with 6200km<sup>2</sup> being for Lake Baringo and 705km<sup>2</sup> for lake Bogoria. There are about ten water inflows into lake Baringo; some are permanent while others are semi permanent. The permanent rivers include the Molo and the Parkerra rivers whereas the seasonal rivers are Dau, Araben and Mugun. These rivers bring to the lake a lot of silt and dissolved substances. The permanent rivers however contain very small amount of silt and dissolved substances compared to the semi –permanent rivers that contain a lot of silt. The source of groundwater located to the west of lake Baringo contains a high level of sodium and chlorine indicating a probable contamination of the water table. The water sources in this region are currently under threats of degradation due to unsustainable land use practices and lack of education and awareness among the community members.

The depth varies from one season to another and currently the lake is becoming shallower due to siltation. The maximum depth ever recorded is 8m and the minimum is 3m.

## **Soil types and Chemistry**

### Sediments and alluvial /silts.

There is a large delta at the Southern end of lake Baringo, which covers a large surface of 40 km<sup>2</sup> (a quarter of the surface area of the lake). To the South- west and South east of the lake are deltas at the mouth of rivers Dau and Araben. These deltas extend to the alluvial cones of the Marigat and Loiminang zones. The Molo River delta occurs at the end of the lake at the junction between Marigat/Loboi plain. It has been observed that the deposited silt and mud is rich in debris from vegetation and animal material that show a slow process of sedimentation. The sediment load in the riverbeds determines further the rate of sedimentation. The soils in the basin are generally sandy, loam and volcanic ash. There is widespread evidence of soil erosion over most parts in the range.

## **Water Quality (physio-chemical characteristics)**

Lake Baringo is a fresh water lake with a Ph of 8.0 – 9.0. Its conductivity is 420us/cm and the transparency or Secchi depth – 10cm

## **Tidal variations**

None

## **Catchment**

The catchment of lake Baringo stretches from Mau escarpment in the South and is drained by Molo river. This area is under intensive agriculture. To the west is the Tungen and Mochogoi hills drained by Pekerra and other seasonal rivers. Land use in the area is mainly

cultivation and livestock keeping. To the east is the Laikipia and Nyahururu uplands drained by Wesenges. Main land use here is cultivation.

A number of forests used to be within this catchment, however in the recent past most of these forests have been lost resulting into serious silting of the lake. Likewise, rivers Lembus from Eldamaravine, Wesenges and Loboï have been changing their river courses to drain into lakes Baringo and Bogoria. Most of the rivers draining into lake Baringo are being used for irrigation.

### **Climate**

Arid and semi arid climate. Average temperature is 30<sup>0</sup>C. The climate is influenced by the ITCZ with two distinct wet seasons.

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### **15. Hydrological values:** (groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.)

The many rivers that drain into lake Baringo bring a large volume of water during years of above average rainfall. This water is stored in the lake thereby preventing flooding and causing stabilization of the shoreline. All the sediments from the permanent and semi-permanent rivers are deposited in the lake making it shallower. This lake does not have a visible down stream community, however it has been postulated that the hot springs at Kapedo are as a result of the recharge from this lake.

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### **16. Ecological features:** (main habitats and vegetation types)

This site has three main habitat types, the open water, the shore line/thin strip of riparian land and the arid or dry land. The edaphic factors as well as the altitude influence the species composition, and distribution of vegetation types. The raised dry areas around the lake have savanna vegetation dominated by *Acacia tortilis* woodland. The *Ficus* species in this area grows on the cliff faces. Communities dominated by *Acacia mellifera*, *A. reficiens* occur to the north and east of the lake. Other important communities include species of *Boscia*, *Commiphora*, *Terminalia* and *Balanites*. The alkaline tolerant grasslands of *Sporobolus spicatus*, *Cyperus papyrus* and strands of *Typha domingensis* and sedges dominate the low-lying wet/moist ground, or the shore line. Algae dominate the open water (Annex 2).

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### **17. Noteworthy flora:** (indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc.)

The various flora found in this wetland are shown in Annex 2. A blue green alga forms about 90.89% of the total Biomass, and is dominated by Green algae and Bacilliarphyta. Several species of macrophytes are confined to the delta region, Loruk and other sandy shores. These include *Typha*, *Pistia stratiotes*, *Nymphaea papyrus*, *Diplakin fuscus* or floating grass. The extensive *Cyperus papyrus* vegetation is endangered by poor land use practices.

Lake Baringo has plant species like Moringa tree which have both medicinal and cultural values. *H. erafloxinon* is used for making boats locally.

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**18. Noteworthy fauna:** (indicating, e.g., which species are unique, rare, endangered, abundant or biogeographically important; include count data, etc.)

Various fauna found within this site are shown in annex 1

Fish – *Oreochromis alcalicus baringoensis* is endemic to this lake

– *Labeo cylindricus* is endangered. Barbus is threatened, whereas Tilapia, Clarius and Protopterus are under fishing pressure.

More than 500 species of avifauna have been recorded in the area.

Large diversity of mammalian species i.e. hippopotamus, reptiles like crocodiles, amphibians and invertebrates are also on the lake.

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**19. Social and cultural values:** (e.g., fisheries production, forestry, religious importance, archaeological site, etc.)

This site has very high socio and cultural values. The lake has 13 islands, which at times are referred to by the locals as devil islands. It encompasses four ethnic communities, the Pokot, Njemps, Turkana and the Kalenjins. These communities have a very high sense of ownership and positive attitude towards the lake. They use it as a source of food through fishing and water for domestic use. The fish production is an important activity in the basin mainly by the local fishermen. It is a source of income and food to the local community. The community acquires firewood and construction material from the bush land and forests surrounding the lake as well as thatch material from the wetland.

The hot springs found in the northern part of the lake are believed to treat skin diseases. In these shores around Loruk, the Pokot community performs some cultural practices, which have not been ascertained yet. The community expresses hostility towards strangers visiting the place. The cliffs to the west are used by Tugens to punish witches. The caves in the cliffs surrounding the lake are of geological value.

### **Religion**

Various sites in this site are used for traditional religious functions and activities.

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**20. Land tenure/ownership of:** (a) site (b) surrounding area .

This is a trust land under the County council of Baringo. The land is under the direct management of the county council and it has been gazetted as a National Reserve.

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**21. Current land use:** (a) site (b) surroundings/catchment

Land is used for a variety of activities that include the following:

- Conservation of biodiversity
- Pastoralism and livestock grazing
- Honey gathering for local and external markets
- Irrigation- small scale projects.

- Tourism for local and foreign visitors
- Community access to medicinal plants
- Sacred prayer (used by the Pokots, Njemps Turkana and Kalenjin communities).
- Fishing for domestic and commercial purposes
- Watering of livestock
- Settlements of communities at appropriate sites

**22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects:** (a) at the site (b) around the site

- Overgrazing - (past and present)- Incidences of over grazing in the area started in 1972, in the 80's the trend reduced, however this increased in 1990 by 5.4% resulting into more pressure on the pastures. This situation has not changed due to lack of willingness to change and the attitudes towards livestock. Land demarcation has increased grazing pressure in this semi arid area and has led to over grazing especially in certain areas of the shore. Formation of hard pans, soil erosion, loss of ground cover and increased surface runoff are all caused by over grazing.
- Siltation, - (past and present)- Cultivation practices like shifting-cultivation has contributed to siltation in the same manner as over grazing. Most of the inlet rivers and the lake are heavily silted.
- Potential for pollution (from solid wastes from nearby urban centres especially Kampi Ya Samaki and tourist hotels and lodges.
- Deforestation – This has taken place in the pretext of clearing land for cultivation, fuel wood (charcoal), building material etc. Most of the catchment forests ( Mau, Tugen and Laikipia) are seriously deforested, resulting into reduced precipitation and high siltation of the river courses.
- Diversion /abstraction of water from Pekerra river for irrigation is a major threat. The Pekkerra river no longer flows to the lake due to this problem. Damming of Molo river has also resulted into reduced lake water levels. Water abstraction for flower farming around Molo has likewise reduced the amount of water that flows into the lake than before.
- Alien invasive plant species- species like Pistia (Nile cabbage) have been occurring more frequent in the lake, an evidence of nutrient run-off into the lake from inappropriate landuse practices in the catchment basin.
- Tourism- Increased tourism has attracted more people to invade one of the islands in the lake thereby destroying vegetation. Use of motor boats for water sports needs to be monitored to curtail chances of pollution and introduction of alien plant species.

**23. Conservation measures taken:** (national category and legal status of protected areas - including any boundary changes which have been made: management practices; whether an officially approved management plan exists and whether it has been implemented)

❖ The lake and surrounding areas has been gazetted as Lake Baringo National Reserve under



the management of Baringo county council. It is therefore by the Wildlife conservation and management Act (section 18) that deals with the establishment and management of National reserves in the country.

- ❖ Research, Monitoring and Inventory are being carried out by Kenya wildlife Service (KWS) and Kenya Marine and Fisheries Research Institute (KEMFRI), together with public education, awareness and capacity building to implement the wise use principles.
  - ❖ Due to the lake's importance for global, regional, national and local importance to conservation of biodiversity, GEF has funded a \$5 million project to improve conservation of the biodiversity and protection of the environment around the lake. The project is currently on-going.
  - ❖ The lake is part of the Rift Valley lakes in East Africa which will also benefit from a GEF funded project to support biodiversity conservation and environmental management around the lakes for sustainable development. The proposal is currently being considered for funding by the GEF secretariat.
  - ❖ An integrated Management Plan is currently being developed through a participatory process involving all stakeholders.
  - ❖ -Construction of sanitary facilities to manage solid waste materials around the Lake and the urban centers is underway by the Baringo county council.
  - ❖ -Eco-tourism development including construction of tourist hotels and jetties to control boating traffic are being implemented by the Baringo county council.
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**24. Conservation measures proposed but not yet implemented:** (e.g., management plan in preparation; officially proposed as a protected area, etc.)

- ❖ -Lake Baringo integrated Management Plan is currently under formulation by the various stakeholders. The current management committee is managing the lake especially the riparian zone.
  - ❖ -Formulation of institutional framework for a Ramsar site and an appropriate management regime to control overgrazing and sensitize the locals on proper water, soil and forestry conservation and management including sustainable agricultural practices.
  - ❖ -Capacity building and implementation of the wise use principle on the natural resources within the lake's catchment basin.
  - ❖ Zonation of the lake for various conservation and management of natural resources, together with restoration and rehabilitation of degraded sites.
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**25. Current scientific research and facilities:** (e.g., details of current projects; existence of field station, etc.)

- ❖ Research, Monitoring and Inventory of the lake's physical and biological resources by KEMFRI, KETRI, KWS and the local Universities.
- ❖ Kenyatta University is conducting studies on Phytoplankton biodiversity and the environmental factors that contribute to growth of the species.
- ❖ An Austrian University is collaborating with KEMFRI to study the limnology of the Lake.
- ❖ Earth Watch is conducting research on ecology of the lake.
- ❖ A Danish is conducting studies on mollusks and causes of bilharzia in the region.
- ❖ GEF Rift Valley lakes project will conduct research on various biological and environmental parameters to improve conservation of biodiversity..

- ❖ KARI research on invasive species and improved agricultural production.

Facilities

Visitor center is in place.

Field research station available

Social amenities available

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**26. Current conservation education:** (e.g., visitors centre, hides, info booklet, facilities for school visits, etc.)

- ❖ Environmental education programs in place at Lake Bogoria Education and visitor centers which can cover lake Baringo as well.
  - ❖ GEF project sponsoring public education, awareness through workshops, seminars and field visits and demonstrations. Other institutions like the Wildlife Clubs of Kenya (WCK) are already collaborating in the awareness program through production of brochures, leaflets, pamphlets and other necessary materials.
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**27. Current recreation and tourism:** (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

- Campsites: for example Fig tree and Acacia.
  - Picnic sites:
  - Lake Baringo hotel.
  - Boating and sailing
  - Water skiing
  - Sport fishing on the lake
  - Bird watching on the lake and surrounding areas
  - Snake Park
  - Camel riding
  - Scenic beauty
- 

**28. Jurisdiction:** (territorial, e.g. state/region, and functional, e.g. Dept of Agriculture/Dept. of Environment, etc.)

Territorial Jurisdiction: County Council of Baringo.

Functional Jurisdiction: Kenya Wildlife Service.

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**29. Management authority:** (name and address of local body directly responsible for managing the wetland)

County Council of Baringo

P.O. Box 64

**Marigat, KENYA.**

Tel: 254-037-40746

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**30. Bibliographical references:** (scientific/technical only)

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## **ANNEX 1**

### **A Check List Of Fish Species In Lake Baringo**

<u>Common name</u>	<u>Scientific name</u>	<u>Economic value</u>	<u>Conservation status</u>
Tilapia	<i>Oreochromis niloticus</i> <i>baringoensis</i>	Exploited by traditional fishermen. Dominates the catch.	Common

Clarias	<i>Clarias gariepinus</i>	Exploited on a limited scale	—
Protopterus	<i>Protopterus aethiopicus</i>	Exploited by traditional by traditional fishermen on limited scale	Exotic
Barbus	<i>Barbus gregorii</i>	Exploited by traditional by traditional fishermen on limited scale	
<i>Labeo</i>	<i>Labeo culindricus</i>	Exploited by traditional fishermen	Endangered
—	<i>Barbus lineomaculatus</i>	Exploited by traditional fishermen	Rare
—	<i>Aplochilichys spp.</i>	Exploited by traditional fishermen	Rare

## **ANNEX 2**

### **A Check List Of The Flora Of Lake Baringo**

#### **Micro-organisms**

*Cyanophyta* ( blue green algae )  
*Microcysts aeruginosa*  
*Cholorophyta* (green algae )  
*Bacillariophyta* ( Diatoms)  
*Anabaena cinalis*  
*Melosira*  
*Botryococcus braunii*  
*Karatella tropica* ( rotifers )  
*Thermocyclops spp.*(copepod)  
*Mesocyclopsspp.* (copepod)  
*Tropodaitom spp.*(copepod)

#### **Macrophytes(moist soil)**

*Urtricularis spp.*  
*Ceratophyllum dumersum*  
*Najas minor*  
*Cyperus papyrus*  
*Pistia stratiotes*  
*Nymphaea caerulea*  
*Diplacne fusca*  
*Aeschynomena elaphroxyron*  
*Cyperus alopecuroides*  
*Cyperus alternifolius*  
*Cyperus difformis*

#### **Dry soils/Savanna soils**

*Acacia reficiens*  
*A. Senegal*  
*A. mellifora*  
*A. tortillas*  
*Ficus sycomorus*  
*Trichilia emetica*  
*Combretum molle*  
*Terminalia brownii* (on the escarpment)  
*Tarchonanthis comphoratus* (on the escarpment)

### **ANNEX 3**

#### **Check List Of Other Animals In Lake Baringo**

Hippopotamus	<i>Hippopotamus amphibious</i>
Crocodile	<i>Crocodylus niloticus</i>
Frogs	<i>Rana species</i>

## ANNEX 4

### A Check List Of Birds Of Lake Baringo

Common Names	Scientific Names	
1.	African fish eagle	<i>Haliaeetus vocifer</i>
2.	Pied kingfisher	<i>Ceryle r. rudis</i>
3.	Malachite kingfisher	<i>Alcedo cristata galeita</i>
4.	African spoonbill	<i>Platalea alba</i>
5.	Goliath heron	<i>Ardea goliath</i>
6.	Pink backed pelican	<i>Pelecanus rufescens</i>
7.	Great white pelican	<i>Pelecanus onocrotalus</i>
8.	Spur-winged lapwing	<i>Venellus spinosus</i>
9.	Long-tailed cormorant	<i>Phalacrocorax a. africanus</i>
10.	Egyptian goose	<i>Alopochen aegyptiacus</i>
11.	Hamerkop	<i>Scopus u. umbrella</i>
12.	Marabou Stork	<i>Leptoptilus crumeniferus</i>
13.	Superb starling	<i>Lamprotornis superbus</i>
14.	Yellow billed stork	<i>Mycteria ibis</i>
15.	Cattle egret	<i>Bubulcus i. Ibis</i>
16.	African jacana	<i>Actophilornis africanus</i>
17.	Black headed heron	<i>Ardea molanocephala</i>
18.	Great white egret	<i>Casmerodius albus</i>
19.	Dimorphic egret	<i>Egretta dimorpha</i>
20.	Green backed heron	<i>Butorides striatus atricapillus</i>
21.	Black tailed godwit	<i>Limosa l. limosa</i>
22.	Grey headed kingfisher	<i>Halcyon l. leucocephala</i>
23.	Lesser Jacana	<b><i>Microparra capensis</i></b>
24.	Common stilt	<i>Himantopus himantopus</i>
25.	Squacco hero	<i>Ardeola ralloides</i>
26.	Common greenshak	<b><i>Tringa nebularia</i></b>
27.	Grey headed gull	<b><i>Larus Cirrocephalus poiocephalus</i></b>
28.	White faced whistling duck	<i>Dendrocygna viduata</i>
29.	Glossy ibis	<i>Plegadis f. falcinellus</i>
30.	Red knobbed coot	<i>Fulica cristata</i>
31.	Grey crowned crane	<i>Balearica regulorum gibbericeps</i>
32.	Sacred ibis	<i>Threskiornis a. aethiopica</i>
33.	Senegal thick-knee	<i>Burhinus senegalensis inornatus</i>
34.	Black winged lapwing	<i>Vanellus melanopterus minor</i>
35.	White stork	<i>Ciconia c. ciconia</i>
36.	Common tern	<i>Sterna h. hirundo</i>
37.	Little egret	<i>Egretta g. garzetta</i>
38.	White browed coucal	<i>Centropus superciliosus</i>
39.	Bridled tern	<i>Sterna anaethetus anartarctica</i>
40.	Common sandpiper	<i>Actitis hypoleucos</i>
41. *	Socotra cormorant	<i>Phalacrocorax nigrogularis</i>
42.	Greater flamingo	<i>Phoenicopteus (ruber) roseus</i>
43.	Lesser flamingo	<i>Phoeniconaias minor</i>
44.	Marsh sandpiper	<i>Tringa stagnatilis</i>
45.	Laughing dove	<i>Streptopelia senegalensis</i>

46.	White-winged dove	<i>Streptopelia reichenowi</i>
47.	Namaqua dove	<i>Oena c.capensis</i>
48.*	Collared dove	<i>Streptopelia</i>
49.	Ring necked dove	<i>Streptopelia capicola somalica</i>
50.	African mourning dove	<i>Streptopelia d. perspicillata</i>
51.	Common bulbul	<i>Pychinonotus barbatus</i>
52.	White headed buffalo weaver	<i>Dinemellia dinemelli boehmi</i>
53.	White browed sparrow weaver	<i>Plocepasser superciliosus)</i>
54.	Speke's weaver	<i>Ploceus spekei</i>
55.	Vitelline masked weaver	<i>Ploceus velatus uluensis</i>
56.	Little weaver	<i>Ploceus l. luteolus</i>
57.	Northern brown throated weavcer	<i>Ploceus castanops</i>
58.	Holub's golden weaver	<i>Ploceus xanthops</i>
59.	Orange weaver	<i>Ploceus aurantius</i>
60.	Hoopoe	<i>Upupa epops</i>
61.	Square-tailed drongo	<i>Dicrurus ludwigii sharpei</i>
62.	Lilac-breasted roller	<i>Coracias caudata</i>
63.	White browed coucal	<i>Centropus s. superciliosus</i>
64.	Grey backed fiscal	<i>Lanius e. excubitoroides</i>
65.	Dwarf bittern	<i>Ixobrychus sturmii</i>
66.	African paradise flycatcher	<i>Terpsiphone viridis</i>
67.	White-bellied go-away bird	<i>Criniferoides laucogaster</i>
68.	Jackson's hornbill	<i>Tockus jacksoni</i>
69.	Hemprich's hornbil	<i>Tockus hemprichii</i>
70.*	Heuglins francolin	<i>Francolinus icterorhynchus</i>
71.	Sooty boubou	<i>Laniarius leucorhynchus</i>
72.	Southern black flycatcher	<i>Melaenornis pammelaina</i>
73.	Blue-naped mouse bird	<i>Urocolius macrourus pulcher</i>
74.	Common drongo	<i>Dicrurus adsimilis</i>
75.	Horus Swift	<i>Apus h. horus</i>
76.	Alpine swift	<i>Apus melba africanus</i>
77.	Red and yellow barbet	<i>Trachyphonus erythrocephalus</i>
78.	Beautiful sunbird	<i>Nectarinia pulchella</i>
79.	Mouse-coloured sunbird	<i>Nectarinia veroxii fischeri</i>
80.	Bennet s woodpecker	<i>Campethera bennettii scriptoricauda</i>
81.	Little beer-eater	<i>Merops pusillus cyanostictus</i>
82.	Madagascar bee-eater	<i>Merops superciliosus</i>
83.	Cinnamon-Chested bee-eater	<i>Merops oreobates</i>
84.	Blue-cheeked bee-eater	<i>Merops p. persicus</i>
85.	White-throated bee-eater	<i>Merops albicollis</i>
86.	White-fronted bee-eater	<i>Merops b. bullockoides</i>
87.	Green winged pytilia	<i>Pytilis melba soudanensis</i>
88.	Red billed hornbill	<i>Tockus erythrorhynchus</i>
89.	White eyed slaty flycatcher	<i>Melaenornis f. fischeri</i>
90.	Blacked headed oriole	<i>Oriolus larvatus rolleti</i>
91.	Helmeted guinea fowl	<i>Numida meleagris</i>
92.	Cardinal woodpecker	<i>Dendropicos fuscescens</i>
93.	Grey headed bush-shrile	<i>Malaconotus blanchoti approximans</i>
94.	Ruppell's long-tailed starling	<i>Lamprotornis purpuropterus</i>
95.	Crested barbet	<i>Trachyphonus vaillantii suahelicus</i>
96.	Lesser sandplover	<i>Charadrius mongolus pamirensis</i>
97.	Common ostrich	<i>Struthio camelus</i>
98.	Black term	<i>Chlidonias n. niger</i>



99.	Golden tailed woodpecker	<i>Campethera abingoni kavirondensis</i>
100.	Greater painted snipe	<i>Rostratula b. benghalensis</i>
101.	Black crowned crane	<i>Balearica pavonina ceciliae</i>
102.	Grey headed heron	<i>Ardea cinenea</i>
103.	Speckled pigeon	<i>Columba guinea</i>
104.	Madagascar squacco heron	<i>Ardeola idea</i>
105.	Green backed heron	<i>Butorides striatus atricapillus</i>
106.	Knob-billed duck	<i>Sarkidiornis melanotos</i>
107.	Woodland kingfisher	<i>Halcyon s. senegalensis</i>
108.	Kittlitz's plover	<i>Charadrius pecuarius</i>
109.	Ringed plover	<i>Charadrius hiaticula</i>
110.	Ruddy turnstone	<i>Arenaria interpres</i>
111.	Hadada ibis	<i>Bostrychia hagedash brevirostris</i>
112.	Jack snipe	<i>Lymnocyptes minimus</i>
113.	Black headed gull	<i>Larus rudibundus</i>
114.	Purple heron	<i>Ardea purpurea</i>
115.	African darter	<i>Anhinga rufa</i>
116.	Great Cormorant	<i>Phalacrocorax carbo</i>
117.	Blacksmiths plover	<i>Venellus armatus</i>
118.	Spur-winged goose	<i>Plectopterus gambensis</i>
119.	Wood sandpiper	<i>Tringa glareola</i>
120.	Three-banded plover	<i>Charadrius tricollaris</i>
121.	Yellow-billed egret	<i>Mesophoyx intermedia</i>
122.	Slender billed gull	<i>Larus genei</i>
123.	Mosque swallow	<i>Hirundo senegalensis</i>
124.	Little grebe	<i>Tachybaptus ruficollis capensis</i>
125.	Hottentot teal	<i>Anas hottentota</i>
126.	Collared pratincole	<i>Gloreola pratincola fuelleborni</i>
127.	Cape rook	<i>Corvus capensis</i>
128.	Fulvous whistling duck	<i>Dendrocygna bicolor</i>
129.	Pintail snipe	<b><i>Gallinago stenura</i></b>
130.	Southern red bishop	<i>Euplectes orix nigrifrons</i>
131.	Water thick knee	Burhinus v. vermiculatus
132.	Fire fronted bishop	<i>Euplectes diadematus</i>
133.	Northern red bishop	<i>Euplectes franciscanus</i>
135.	Yellow crowned bishop	<i>Euplectes afer ladoensis</i>
136.	Great black headed gull	<i>Larus ichthyaetus</i>
137.	Crab plover	<i>Dromas ardeola</i>
138.	Black crowned night heron	<i>Nycticorax n. nycticorax</i>

## **ANNEX 5**

### 2. FISH LANDING FOR LAKE BARONGO

Quantity and value of fish in Lake Baringo between 1986 and 1995

Year	Quantity(Metric tons)	Value Kshs. ' 000
1986	152	511
1987	116	435
1988	96	372
1989	233	922
1990	380	2,259

1991	130		745	
1992	255		1,935	
1993	37		399	
1994	7		70	
1995	126		2,646	

Source: Statistical section, Fisheries department- Kenya

Monthly fish landing in lake Baringo between  
1986-1995

Month	Year									
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
January	16	5	8	20	32	15	24	11		5
February	15	3	9	6	31	13	26	10		4
March	14	2	8	14	42	9	33	9	1	4
April	10	2	9	7	41	7	17	7	1	5
May	12	2	10	5	45	10	17		1	5
June	11	2	-	12	54	14	17			12
July	17	3	-	25	43	12	22			33
August	15	11	8	23	34	19	26			12
September	12	26	23	32	20	8	26		1	13
October	11	35	5	33	14	2	22		1	9
November	12	16	9	26	14		12		1	12
December	7	9	7	30	10	21	13		1	12
<b>Total</b>	<b>152</b>	<b>116</b>	<b>96</b>	<b>233</b>	<b>380</b>	<b>130</b>	<b>255</b>	<b>37</b>	<b>7</b>	<b>126</b>

Source: Statistical section, Fisheries department- Kenya