

# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7, as amended by Resolution VIII.13 of the Conference of the Contracting Parties.*

Note for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Bureau. Compilers are strongly urged to provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of maps.

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## Lake Mburo-Nakivali Wetland System Ramsar Information Sheet (RIS)

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**2. Date:** 22 September 2005

**3. Country:** The Republic of Uganda

**4. Name of the Ramsar site:** Lake Mburo-Nakivali Wetland System.

### 5. Map of the Ramsar Site:

Hard copy: attached  
Digital (electronic) format: yes

**6. Geographical coordinates:** 30°49' – 31°04" E and 00°33' – 00°47" S.

### 7. General Location:

Lake Mburo-Nakivali wetland system lies in Mbarara District in south central Uganda close to the borders with Tanzania and Rwanda (Byaruhanga *et al.*, 2001). The System lies southwest of Mbarara District, in the shallow valleys of various tributaries of the Kagera River. The lakes constitute areas of open water in an extensive papyrus swamp. The system is located 60 kms from Mbarara town.

**8. Elevation:** 1,280 – 1,520 m above sea level.

**9. Area:** 26,834 hectares

**10. Overview:**

Lake Mburo-Nakivali wetland system comprises of open and wooded savanna, seasonal and permanent wetlands and five lakes of which Lake Mburo is by far the largest. From west to east these lakes are: Mburo, Kigambira, Mutukula, Kazuma and Bwara. Most of the wetland system lies in a National Park, which was gazetted in 1982. The other part lies outside the National Park and covers Lake Nakivali and the surrounding swamps in the sub counties of Rugaaga, Kashumba, Ngarama and Kabingo.

The park contains a wide variety of habitat types, which gives it a surprisingly high diversity of animals and plants for its size.

The system is a unique habitat, which lies at the convergence zone of two biological zones. It supports globally threatened species of birds, supports two of the endangered cichlid fish species which have gone extinct in the main lakes and it is the only system in Uganda in which the Impala is found. The system also provides refugia to 22 species of Palaearctic and Afro-tropical migrant birds during adverse conditions.

The Lake Mburo wetland system is of immense socio-economic value. It is a source of water for domestic use, livestock and wildlife. The system is source of pasture for the local herds during droughts, a source of fish and source of materials for crafts and thatching. The park's location near the Masaka-Mbarara highway makes it easily accessible from Kampala.

**11. Ramsar Criteria:**

Criteria used to justify wetland include: 2, 3, 4 and 8

**12. Justification for the application of each Criterion listed in 11. above:**

**Criterion 2: Lake Mburo Wetland System supports threatened and vulnerable species of birds and other animals.**

Lake Mburo Wetland system supports globally threatened bird species, which include the Papyrus Yellow Warbler (*Chloropeta gracilirostris*) (vulnerable) and Shoebill (*Balaeniceps rex*) (vulnerable).

The Shoebill is a rare bird within the park, but encountered in the inundated seasonal grass swamps as well as clearings in permanent swamp. There are isolated records of one other threatened species, the Lappet-faced vulture (*Torgos tracheliotos*) (vulnerable) and two other near-threatened species – Lesser Flamingo (*Phoeniconaias minor*) and Great Snipe (*Gallinago media*).

**Criterion 3: Lake Mbuoro Wetland System supports populations of plant and animal species important for maintaining the biological diversity of the area.**

Lake Mbuoro wetland system occurs at the convergence of two biogeographical zones - the Lake Victoria regional mosaic and the Guinea-Congolian biogeographic region. It contains the Lake Victoria dry woodlands restricted – range species and the Lake Victoria basin biome species. Lake Mbuoro wetland system therefore has a diverse bird fauna. It has over 310 species recorded. These include a number that have not been recorded in other parks in Uganda such as Rufous-bellied Heron (*Ardeola rufiventris*), Black-throated barbet (*Tricholaema melanocephala*), Green-capped Eremomela (*Eremomela scotops*), Southern Red Bishop (*Euplectes orix*) and Long-tailed cisticola (*Cisticola angusticaudus*). The site is important for Lake Victoria biome species such as White-winged warbler (*Bradypterus carpalis*) and Carruthers's cisticola (*Cisticola carruthersi*), which are rare in other Important Bird Area's of Uganda. The site has one Afrotropical highlands biome species, the Baglafaecht Weaver (*Ploceus baglafaecht*).

A total of 68 mammal species have been recorded in the area now covered by the park, of which 16 are wild ungulates. Lake Mbuoro is the only National Park in Uganda in which the Impala *Aepyceros melampus* is still found; and it is one of the few areas where one finds the Eland *Taurotragus oryx* and the Plains (Burchell's) Zebra *Equus burchelli* (Erickson, 1995).

The system's positioning (being at the convergence zone of two biogeographical regions), and the fact that the above species of birds and animals are capable of surviving in the Mbuoro wetland system, implies that the system is important for their existence and hence maintenance of the biological diversity of the region.

**Criterion 4: Lake Mbuoro Wetlands system provides refugia to wetland bird specialists during adverse conditions.**

Lake Mbuoro Wetlands system provides refugia to 22 wetland bird specialists during adverse conditions. The Wetlands Inventory Team in the wetlands conservation and management programme (now Wetlands Inspection Division) inventory results showed 13 species are Palaearctic migrants most significant being the White-winged Black Terns (*Chlidonias leucopterus*) and 9 species are Afro-tropical migrants such as large congregations of Abdim's Stork (*Ciconia adbimii*) and Grey Crowned Cranes (*Balearica regulorum*). Lake Mbuoro is the only lake in Uganda known where the African Finfoot (*Podica senegalensis*) has been recorded.

Lake Mbuoro supports two of the endangered cichlid fishes, which have gone extinct in the main lakes including Lake Victoria. The species are *Astatotilapia aeneocolor* and *A. oregosoma*.

**Criterion 8: Lake Mbuoro Wetlands System is an important spawning ground for the endangered cichlid fish and other commercially exploitable fish species.**

The swamps in the wetland system and the inshore zone vegetation around Lake Mbuoro are important spawning ground for the fishery of Lake Mbuoro wetland system. The wetland system is also important as a nursery and feeding ground for the endangered cichlid fishes and other commercially exploitable fish species.

### **13. Biogeography:**

The system lies at the convergence zone of the Lake Victoria regional mosaic and the Guinea-Congolian biogeographic region. The predominant vegetation is mainly the wooded Savanna with *Acacia / Commiphora* thicket and grasslands.

### **14. Physical features of the site:**

**Hydrology:** There seems to be very little information on this group of lakes, which lie west and southwest of Mbarara in the shallow valleys of various tributaries of the Kagera River. All these Lakes are areas of open water in an extensive papyrus swamp. The chief inflow is the Ruizi River from the west, which has a common headwater swamp with the River Ntungwe, which flows, to Lake Edward. The main outflow is the River Kibali, which flows via the Kagera, into Lake Victoria. The complex is surrounded by savanna grasslands but inter-connected by aquatic grass and herb swamp. The major outlet of Lake Kijjanebarora is the Kibale River. It is much the same depth all over and when the water level is high it overflows into the Kibale River. This happens about every 12 years and in between such times it has no outlet. Kijjanebarora has a maximum depth of 4.8 metres. The pH of Lake Kijjanebarora is about 8.3.

**Climate:** The Climate of Lake Mbuoro wetland system is tropical in nature. The system is found in the Ankole-Southern climatic zone (State of Environment Report, 2002). Lake Mbuoro Wetlands System lies in a rain shadow area between Lake Victoria and the Rwenzori Mountains. The system has two marked seasons, the rain and dry seasons and receives a bi-modal low rainfall ranging between 500 and 1000 mm (State of Environment Report, 1998). But the rainfall tends to be erratic and unreliable, causing shortage of pastures and thus affecting the behaviour of wildlife, including birds, and creating demands on the park by local Pastoralists. Temperature ranges between 23.3 – 24.8°C. Evapotranspiration of areas northwest, north, and north east to east, ranges between 1450 – 1600 mm (State of Environment Report, 1998). However, areas south and south west of the wetland system experience a much lower evapotranspiration ranging between 1300 – 1450 mm.

**Geology and Soils:** Pre-Cambrian rocks underlie Lake Mbuoro wetland system. The rocks comprise a mixture of Cenozoic Pleistocene to Recent rocks, wholly granitized–Granitoid and highly granitized rocks, and Karagwe – Ankolean system. Argillite rocks predominate but are more arenites and silty rocks, which are regularly, distributed as thin bands throughout the system. The system is predominated by ferrallitic soils which are mainly sandy loams and sandy clay loams.

No information is available on the water quality characteristics, Soil chemistry, sediment characteristics, water depth fluctuations and permanence.

### **15. Physical features of the catchments area:**

Lake Mbuoro and associated wetland system is located in a semi-dry grassland / woodland area commonly known as the cattle corridor in Uganda. Ankole and koki

surface and Upwarped Tanganyika surface geomorphic units (Aniku, 1996). The geomorphic units make up many of the peculiarities of landscape and soil patterns in the catchment. The area is surrounded by gentle rolling hills mainly used for cattle grassing. The main catchment for water is through river Ruizi traced through its long channel up to Bushenyi District. The Ruizi River enters a vast low lying topography surrounded by Kooki hills. In between the hills lie the Kooki lakes. These lakes include Lake Mburo, Lake Nakivali and Lake Kachera which comprise the proposed Ramsar site. The features of the catchment are relatively similar to those of the site (refer to section 14).

#### **16. Hydrological values:**

Lake Mburo Wetlands System plays an important hydrological role for the waters entering Lake Victoria via the main outlet of River Kibale, which flows via River Kagera. It also plays an equally important hydrological role for the waters entering Lake Edward via the outlet of River Ruizi, which has a common headwater swamp with River Ntungwe, which flows to Lake Edward. The main hydrological function of the system is water storage, flood control, ground water recharge, and water purification. During the dry season, the system maintains a steady discharge of water and supplements the water supply to the surrounding areas including Lake Edward and Lake Victoria.

The system also plays a role in trapping sediments carried from the surrounding catchments in times of heavy run-off and hence reduces the level of sediments carried to lakes Edward and Victoria, thereby helping to maintain the natural clean water conditions important for the survival of many fish species in the lake.

#### **17. Wetland Type in order of importance:**

**O** - (Permanent freshwater lakes); **Tp** - (Permanent freshwater marshes) **P** - (Seasonally flooded plains); **M** - Riverine Swamps (Rivers Ruizi, Ntungwe and Kibale).

#### **18. General ecological features:**

The park contains a wide variety of habitat types, which give it a surprisingly high diversity of animals and plants for its size. The dominant tree species is *Acacia hockii*, which is widespread in many areas, such as well-drained hillsides and low-lying hilltops, which were formerly much more open and provided good grazing areas for cattle and wildlife. The present extent of this acacia can probably be attributed to overgrazing and frequent burning.

#### **19. Noteworthy flora:**

Noteworthy flora is *Acacia hockii* which is one of the dominant tree species. Five species of wetland dependent plants belonging to 5 genera have been recorded in the Lake Mburo wetland system (Scott *et al.*, 1996).

## **20. Noteworthy fauna:**

The Red-faced Barbet (*Lybius rubrifacies*) is an extremely rare species but occasionally seen around Rwonyo camp (Lake Mburo National Park Headquarters). It is a restricted – range species, whose distribution defines the dry woodlands west of Lake Victoria secondary area. It is not known anywhere else in Uganda. The Papyrus Gonolek (*Laniarius mufumbiri*) has also been recorded in the park. It is a common and frequently heard bird in the papyrus swamps, especially at the mouth of River Ruizi. It is also a Lake Victoria biome species, which is rare in other Important Bird Areas in Uganda.

Others include the Lake Victoria biome species such as White-winged warbler (*Bradypterus carpalis*) and Carruthers's cisticola (*Cisticola carruthersi*), which are rare in other Important Bird Area's of Uganda. The site also supports one Afrotropical highlands biome species, the Baglafaecht Weaver (*Ploceus baglafaecht*).

Lake Mburo supports two of the endangered cichlid fishes, which have gone extinct in the main lakes including Lake Victoria: *Astatotilapia aeneocolor* and *A. oregosoma*. Lake Mburo National Park is the only place in Uganda where the Impala *Aepyceros melampus* is found. It is also one of the few areas in Uganda where one finds the Eland *Taurotragus oryx* and the Zebra *Equus quagga*.

## **21. Social and cultural values:**

Cattle keeping is an important economic activity in the area. During the dry season, the local communities normally graze and water their animals in the park in accordance with terms and conditions stipulated in the Memorandum of Understanding with Uganda Wildlife Authority. The local community uses the lake as a source of water for both domestic use and livestock. For centuries the permanent surface waters at Lake Mburo and River Ruizi (that runs along the south – western boundary of Lake Mburo National Park) have been important areas for watering cattle during periods when more localised water supplies dry up.

Local communities also harvest the natural herbaceous vegetation e.g. papyrus for crafts. Papyrus is also harvested and used for production of fish mats by fishermen.

The lakes (especially Lake Mburo) are an important source of fish proteins for domestic consumption as well as commercial purposes. Fishing is a long established activity at LMNP and remains the area's most significant economic activity in addition to cattle keeping. Fishing therefore offers considerable employment opportunities to a number of fishermen in the nearby villages.

## **22. Land tenure/ownership:**

*a) Within the Ramsar Site:*

According to the 1995 Constitution, the Government of Uganda holds wetlands in trust for the people. Therefore the government owns Lake Mbuoro wetlands system.

*b) In the surrounding area:*

Land in the surrounding areas is under customary ownership. The rest of the system lies on public land.

### **23. Current land (including water) use:**

*Land use within the Ramsar site*

Lake Mbuoro is a National Park. It is used for biodiversity and wildlife conservation activities as well as tourism. There are a number of tourist facilities and an education centre for that purpose. The surrounding communities are mainly cattle keepers. The waters of lakes Mbuoro and Nakivali are used for watering cattle as well as water for domestic consumption. Being a protected area, many wildlife and biodiversity researchers use the park for scientific research.

Lake Mbuoro wetland system is used for fishing, being the main source of fish for the surrounding communities and nearby towns. Lake Nakivali is used for commercial fisheries of *haplochromines*. The papyrus vegetation is used for making mats, which are used by fishermen during fishing.

*Land use in surrounding / catchment areas*

The Park was formerly a Game Reserve in which 241 families, with their cattle herds, resided. The conflict of settlements in the Park was resolved during the 1990's when the Ranches Restructuring Board resettled the landless pastoralists. The settlement of the landless saw the park reduced by over 50% to the present size. The wetter parts of the area, which were degazetted in 1986, are now under cultivation, and a settlement scheme has also been established on the fringes of the park.

### **24. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:**

*Threats within the Ramsar site*

There has been a reduction in diversity of large mammals as a result of human activity, which, over the years, has included hunting and habitat destruction through cultivation and settlement. Some large mammals, such as Elephants, Black Rhinos, Lion and Roan Antelope are believed to have been exterminated in the area.

Fishing pressure on Lake Mbuoro and Lake Nakivali and illegal fishing methods threaten the fish stock in the wetland system.

*Threats from outside the Ramsar site*

The animosity created between local communities and the park since the gazettelement of Lake Mbuoro National Park has persisted to some extent. The conflict is mainly on

over grazing and water. Approximately 20,000 heads of cattle more or less regularly graze in neighbouring areas, which were degazetted in 1986. During periods of drought, the pastoralists look to the park for grazing and water. Agriculturalists are also a potential threat to the park since the wetter parts of the area (degazetted in 1986), are now under cultivation, and settlement schemes have also been established on the fringes of the park. Crop raiding by wildlife also causes conflict.

#### **25. Conservation measures taken:**

There are efforts to involve the local communities in conservation and to sensitise them to the value of wildlife, coupled with other initiatives, such as provision of water outside the park. NGOs (African Wildlife Foundation) together with the Lake Mburo National Park spearheaded these initiatives in the late 1990s. The threats to the System are gradually reducing but a lot, however, remains to be done.

The government has also undertaken the Ranch restructuring programme, which aimed at settling the herdsmen. The restructuring programme led to the degazettement of part of the park to the present size. The restructuring programme has contributed to the conservation of the site / area by reducing the number of herds that enter the park to graze and water. It has led to change from a nomadic way of keeping cattle to settled way of practising pastoralism.

#### **26. Conservation measures proposed but not yet implemented:**

The Wetland Inspection Division in collaboration with Uganda Wildlife Authority is to develop a management plan for the site which will be geared towards addressing the conservation of the wetland system and the wildlife within the park.

#### **27. Current scientific research and facilities:**

Makerere University students, Mbarara University of Science and Technology as well as international researchers and institutions in Uganda use the Lake Mburo National Park for research. Research facilities are in the Universities and at Uganda Wildlife Authority.

#### **28. Current conservation education activities related to communications, education and public awareness (CEPA) related to or benefiting the site:**

Uganda Wildlife Authority established a community conservation department whose activities among others are to educate the local communities about conservation issues. The community conservation department of Lake Mburo National Park established an education centre at Minenkya where the Park's headquarters are located.

#### **29. Current recreation and tourism:**

Lake Mburo National Park was gazetted as a National park in 1982. There are a number of tourist facilities and an education centre. The park's location near the Masaka – Mbarara highway makes it easily accessible from Kampala, the capital city of Uganda. The park is renowned for its mammals especially the Impala, as it is the only National Park in Uganda where you find the Impala. It is also the only National park in southwestern Uganda where you find the Eland and the Zebra.

### **30. Jurisdiction:**

a) *Territorial jurisdiction*

Mbarara district Local Government and its lower councils.

b) *Functional jurisdiction*

Uganda Wildlife Authority

### **31. Management authority:**

According to the 1995 Constitution, wetlands are held in trust for the people by the government. Functionally therefore, Lake Mburo-Nakivali Wetland System is in the hands of the Central Government. The 1997 Local Government Act devolved the wetland management to the District Local Governments.

Therefore, the management authorities are:

Uganda Wildlife Authority  
P. O Box 3530,  
Kampala  
UGANDA

And

Mbarara District Local Government  
(Rugaaga, Kashumba, Ngarama and Kabingo Sub-counties)  
P. O. Box 1,  
Mbarara,  
UGANDA.

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