

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.

Murchison Falls – Albert Delta Wetland System Ramsar Information Sheet

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2. **Date:** 20 September 2005.

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

4. **Name of the Ramsar site:** Murchison Falls-Albert Delta Wetland System

5. Map of the Ramsar Site:

Hard copy: attached
Digital (electronic) format: yes

6. **Geographical coordinates:** 31°23' – 32°00" E and 01°52" - 02°01"N.

7. General Location:

Murchison Falls-Albert Delta Wetland System is situated in the north west of Uganda, 90 km north of Masindi town. The system is situated in Masindi and Gulu Districts along River Nile towards the Lake Albert. The biggest part of the system lies within the Murchison Falls National Park. A small bit (part of the Albert delta) lies outside the National Park.

8. Elevation: 650 – 1,290 m above sea level

9. Area: 17,293 hectares

10. Overview:

Murchison Falls Wetland System stretches from the top of Murchison Falls where the River Nile, or a large part of it, flows through a rock cleft some six metres wide, to the delta at its confluence with Lake Albert. The stretch is part of Victoria Nile and it has over 50 tributaries, which flow through thick papyrus swamp towards the lake. The Murchison Falls make one of the main tourist attractions for Murchison Falls National Park and Uganda as a whole. The convergence zone between Lake Albert and the delta forms a shallow area that is important for water birds, especially the Shoebill, Pelicans, Darters and various heron species. The rest of the park is dominated by rolling savannas and tall grass with increasing thick bush, woodlands and forest patches in the higher and wetter areas to the south and east.

Murchison Falls National Park was gazetted in 1952 and changed name in the 1970s to Kabalega Falls National Park (Byaruhanga, *et al* 2001). However, since the new name was not officially gazetted by the government of the day, the park reverted to its former name in 1979. Conservation in Murchison Falls National Park is based on the large mammals, which have the greatest impact on both the ecosystem and the majority of people around the park as well as visitors.

The Murchison Falls Wetland System is of social and cultural importance to the people of the area. The delta is an important spawning and breeding ground for the Lake Albert fisheries. The system contains indigenous fish species, which are of important conservation interest, several of which are related to the lower Nile species. It contains three globally vulnerable species of birds as well as others among which are migrant birds. It is becoming well-known internationally as one of the best sites in Africa for watching the Shoebills. It forms a feeding and watering refuge for wildlife in the National Park during dry seasons. It is also an important tourism and recreation area, which is important for biodiversity conservation and revenue.

Murchison Falls Wetland system is being proposed for listing because of its importance as a spawning ground for Lake Albert fisheries, its support to globally threatened bird species and its support to biodiversity conservation during the dry seasons.

11. Ramsar Criteria:

Criteria used to justify wetland include: 2, 3, 7 and 8.

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

Criterion 2: Murchison Falls Wetland System supports rare, vulnerable, and endangered species.

Murchison Falls Wetlands system supports globally threatened species of birds (Byaruhanga, *et al.* 2001). The Shoebill *Balaeniceps rex* (globally vulnerable species) is a resident bird present in the park. Over 40 individuals were estimated in 1998/9 on the stretch from the falls to the delta. The Shoebill is an important tourist attraction of Murchison National Park, the only park where one is almost certain of seeing the bird at any time of the visit. The Black winged Pratincole *Glareola nordmanni* (CMS App. II) is a Palaearctic migrant supported by the wetland system during the months of April (Britton 1980). Present at the site are also the Lappet-faced Vulture *Torgos tracheliotus* (VU), Lesser Kestrel *Falco naumanni* (VU) and Denham's Bustard *Neotis denhami* (CITES App. II). Other animals globally threatened but supported by the system include the African Elephant *Loxodonta Africana* (VU) and the Nile Crocodile *Crocodylus niloticus* (CITES App. II) with one of the biggest numbers known for the species in Uganda.

Criterion 3: Murchison Falls Wetland System is important for maintaining biological diversity of the region.

Conservation at Murchison Falls National Park is based on the biological diversity within the Park. The system is at the convergence zone of four biomes of which each has unique flora and fauna. The Nile also forms the nerve around which animals in the park depend for watering, feeding, breeding and roosting. The checklist of mammals includes 76 species, but there are undoubtedly other species particularly small ones such as squirrels, bats, rodents and shrews, that have not yet been recorded.

The Park which includes the wetland systems boasts an extensive avifauna with a checklist of over 460 species, three of which are Palaearctic migrants. The park is particularly important for Sudan-Guinea bird species with 14 of 22 species recorded. It supports bird species from several other biomes such as seven of the 12 Lake Victoria biome species, 11 of 144 Guinea–Congo Forest biome species, six out of 87 Afrotropical Highland biome species and three of 32 Somali–Masai biome species. The African Skimmer *Rynchops flavirostris* with 5% of the regional population has been regularly recorded on the river Nile banks congregating on sand banks a few kilometres below the Falls. The Papyrus Gonolek *Laniarius mufumbiri* is also regularly recorded in the dense papyrus swamp in the delta near Lake Albert. The Rock Pratincole (*Glareola nuchalis*) is common above the Falls. The Pallid Harrier *Circus macrourus* is also present at the site.

Criterion 7: Murchison Falls Wetland System support a number of indigenous fish species that are representative of wetland benefits and / or values that contributes to Albert fishery and global biological diversity.

The fish fauna of Lake Albert is very different from that of Lake Victoria. Few L. Victoria fish species are present in Lake Albert. Lake Albert waters are densely populated by many other endemic species, the majority of which are typical of the lower waters of the Nile. Forty-four (44) species of fish were recorded in Lake Albert in 1928 (Worthington 1928). Some have not been recorded since. Of the 46 species, which have been found in Lake Kyoga, the majority are also found in Lake Victoria, whereas only 6 species can be identified with fish found in Lake Albert or the waters of the Nile below the Murchison Falls. The reason for this is that the Murchison Falls now afford an absolute barrier to fish distribution. The Murchison Falls wetland

system therefore supports important indigenous fish species of conservation interest. Some of the commercially important indigenous fish species of Lake Albert include *Lates albertianus*, *Citherinus citherius*, *Tilapia galilaea*, *Distichodus niloticus*, *Bagrus bayad*, *Labeo horie*, *Alestes baremosa*, *Hydrocyon forskalii*, *Synodontis schall* and *Mormyrus caschive*. It is estimated that there are 5,000 boats on Lake Albert alone and during the peak fishing period (June and July), the average catch is about 200 kg / boat / day (NEMA 2002). About 18,000 fisher folk are involved in the fishing business in Lake Albert. This is representative of the wetland benefit and contributes immensely to poverty reduction in the area.

Criterion 8: Murchison Falls Wetland System is an important spawning ground and or nursery on which fish stocks, either within the wetland and Lake Albert fisheries depend.

The Murchison Falls Wetland System provides spawning ground for several indigenous fish species that are present in the system. Most of these migrate from the deeper waters of Lake Albert to spawn in the Murchison Falls wetland system. The delta also represents one of the main spawning grounds and refugia for many Lake Albert fish species (NEMA 1998).

13. Biogeography:

Murchison Falls wetland system lies at the transition of two biogeographical regions. The Lake Victoria Regional Mosaic to the southern part and the Sudanian regional Centre of endemism to the north. The predominant vegetation is mainly the wooded Savanna to the north and the medium low altitude rainforest to the south.

14. Physical features of the site:

Climate: Murchison Falls Wetland system exhibits a tropical climate which is typically hot and humid. According to the State of Environment Report (2002), the system falls within the Acholi-Kyoga region climatic zone. The air currents passing over Lake Albert influence the climate of Murchison Falls Wetlands System. The system has distinct seasons, the rainy and dry season. The area experiences a bi-modal medium rainfall with two seasons: March – May and August – November, ranging between 500 to 1000 mm. However, other areas within the system receive rainfall ranging from 1000 to 1500 mm (State of environment report 1998). The mean annual rainfall for Murchison Falls National Park area is 1,085 mm. In the Lake Albert region, where the delta lies, rainfall is considerably less than in the surrounding country and averaged annually 838 – 1,143 mm. The mean annual temperature ranges between 22° to 29°C. The general temperature in the Lake Albert region is considerably higher because the rift valley is on the whole much hotter than that of the surrounding country. The system experiences an evapotranspiration of between 1600–1750 mm.

Hydrology: The waters of Lake Albert are alkaline and have a very high proportion of salts in solution so much that the water has a distinct taste. The samples from the open water had 540–518 parts of dissolved solids per million.

Geology and Soils: Geological formations of the area reveal that the system is underlain by Pre-cambrian rocks, which comprise cenozoic rocks of Pleistocene to recent (State of environment report 2002). The rocks have given rise to vertisol soils near the delta and topographic not differentiated soils away from the delta towards the Murchison Falls.

No information is available on water quality, Soil chemistry, Soil pH, Sediment characteristics and water depth fluctuations.

15. Physical features of the catchment area:

Comprises the Buganda surface (in the southern catchments), Tanganyika surface (east and north east sides), degraded Tanganyika surface (middle running in north-south direction) and Rift valley flats (western side) geomorphic units (Aniku, 1996). The geomorphic units make up many of the peculiarities of landscape and soil patterns in the catchment. These units formed during the uplifting of the catchment that resulted into the western arm of the Great East African Rift Valley. The catchments are generally flat sloping towards the Rift Valley. The flat plains are bisected by over 50 tributaries which flow through thick papyrus swamp towards Lake Albert delta.

The features of the catchment are relatively similar to those of the site (refer to section 14).

16. Hydrological values:

The Murchison Falls wetland system plays an important hydrological role for the waters entering Lake Albert and the Albert Nile. It plays a big role in water purification and maintenance of the water quality by retaining sediments and nutrients from the run-off from the escarpments down the Rift valley. It also helps to control the floods during rainy seasons releasing it slowly to Lake Albert and Albert Nile.

17. Wetland Type in order of importance:

Tp - (Permanent freshwater marshes); **M** – (Riverine Swamps); **P** – (Seasonally flooded plains); **O** - (Permanent freshwater lake).

18. General ecological features:

The Murchison Falls wetland system is dominated by Papyrus swamps on either side of the Victoria Nile. To the South of Bugungu Wildlife Reserve, which is situated south of Murchison Falls National Park, is a large medium altitude, semi-deciduous forest, the Budongo Forest Reserve. The rest of the park is dominated by rolling savannah and tall grass with increasing thick bush, woodlands and forest patches in the higher and wetter areas to the south and east.

19. Noteworthy flora:

Murchison Falls Wetland System supports wetland-dependent plants, which occur in small numbers although they may be widespread. It contains a member of the family Nymphaeaceae called *Nymphaea lotus*.

20. Noteworthy fauna:

The system boasts an extensive avifauna with a checklist of over 460 species, due to its large size and wide range of habitats. Noteworthy avifauna includes three globally vulnerable species including Lappet-faced Vulture (*Torgos tracheliotos*), Lesser Kestrel (*Falco naumanni*) and Shoebill (*Balaeniceps rex*). The system also supports congregatory bird species including the African Skimmer (*Rynchops flavirostris*) and the Rock Pratincole (*Glareola nuchalis*). Lesser Flamingo (*Phoeniconaias minor*) and Great Snipe (*Gallinago media*) have occasionally been recorded (J. Arinaitwe pers. Comm.).

Other fauna of global conservation interest include the African Elephant *Loxodonta africana* and the Nile Crocodile *Crocodylus niloticus*. The stretch of river between Murchison Falls and the delta has one of the biggest concentrations of Nile Crocodiles in the world. Poachers seriously persecuted Elephants during the 1970s and early 1980s, reducing the population from more than 13,000 to less than 1,000 in the 1990s; but they are now recovering.

The Lake Albert waters are densely populated by many fish species, the majority of which are typical of the lower waters of the Nile and include important indigenous fish species of important conservation interest (see criterion 7).

21. Social and cultural values:

The local people poach the wildlife game for meat. Fishing in Lake Albert and the Victoria Nile is an important economic activity for the Bagungu people. The fish is eaten locally and some is sun-dried and exported to the Democratic Republic of Congo and to the refugee camps. There are some agricultural activities going on in some parts of the system and fishermen have settled in some parts of the wetland system. Grazing of goats and cattle is another activity that has sprung up as a result of the people settling in the wetland system. The system is a source of water for livestock and domestic use.

Tourism and recreation in Murchison Falls National Park and Bugungu Wildlife Reserve is an important activity for the Uganda Wildlife Authority. The local community participates in way of provision of services.

22. Land tenure/ownership:

The biggest part of Murchison Falls-Albert Delta wetland system and its surroundings lies inside Murchison Falls National Park. A bit of it (the delta) lies outside the

Murchison Falls National Park in the districts of Masindi and Gulu. This implies that the biggest part of the system is a protected area under Uganda Wildlife Authority. The area, which falls outside the national park, is owned by the central government according to the 1995 wetlands statute.

23. Current land (including water) use:

Land uses within the Ramsar Site

The swamps, river and lake are used as a source of water supply for domestic use and livestock. The river is also used for transport. The system is also part of Murchison Falls National Park used for tourism.

Land uses within the surrounding / catchment areas

Some subsistence agriculture is practised in the catchments. Crops such as plantains and Cassava are grown in the area. Livestock grazing in the catchment including inside the Bugungu wildlife reserve is done in the area. Grazed animals include goats and cattle. The local communities use the system for subsistence as well as commercial fishing. The fish is exported to DRC and also used to feed the refugees in camps in northern Uganda. Illegal hunting for the game meat is rampant in the area. The catchment is also part of Murchison Falls National Park used for tourism.

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

Threats from within the Site

Poaching is the main problem in the Murchison Falls-Albert Delta Wetland System. The people around the park, notably the Acholi in the north, the Bachopi in the southeast, and a more recent community of the Bagungu on the western boundary are responsible for most of the poaching in the System.

Threats from surrounding / catchments area

There is also the conflict of fishermen and the Nile Crocodiles. The local communities see the Crocodiles as an impediment to their fishing activity. They view crocodiles as creatures which only deserve death. The fishermen kill the young and juvenile crocodiles, which are trapped in their gill nets.

25. Conservation measures taken:

Uganda Wildlife Authority protects wetlands within Murchison Falls National Park and the Game Reserves. However, those outside, e.g. part of the delta are not under Uganda Wildlife Authority protection. The Local Government protects those outside

the Park. *Nature* Uganda identified Murchison Falls National Park as an Important Bird Area for Uganda.

26. Conservation measures proposed but not yet implemented:

The zone around Murchison Falls was proposed by Uganda for inscription on the World Heritage site list but has not been declared so. It does qualify with two of the four required criteria; "superlative natural phenomenon" (the falls) and "the most important and significant natural habitats where threatened species of animals and plants of outstanding universal value survive" like the Crocodile and Shoebill. Murchison Falls National Park has a management plan. There are plans by Uganda Wildlife Authority to incorporate the World Heritage Site concerns into the parks management plan.

27. Current scientific research and facilities:

Fisheries Resources Research Institute (FIRRI) in Jinja has conducted research on the Lake Albert fisheries and associated swamps. Several scientific researches have been undertaken on wildlife in Murchison Falls National Park and Bugungu Wildlife Reserve. Most studied animals include the Nile crocodile and the African Elephant by national and international researchers, and students from Makerere University. There are no research facilities at the site, but Murchison Falls National Park has a monitoring and research programme for the park.

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

Uganda Wildlife Authority has a department for Community Conservation. Its role is to educate the communities around the Parks about conservation issues and also involving them in conservation matters that affect them.

29. Current recreation and tourism:

Tourism booms around the Victoria Nile Delta and upstream on the Victoria Nile to the falls. There is the Boat launch, which is normally enjoyed by tourist as they view the scenery and the magnificent Murchison Falls. The stretch is also famous for the Nile Crocodiles.

30. Jurisdiction:

a) Territorial jurisdiction

Uganda Wildlife Authority, the Local Governments for Masindi and Gulu districts and their lower councils.

b) Functional jurisdiction

Uganda Wildlife Authority, Wetland Inspection Division (WID), National Environment Management Authority (NEMA), Uganda Wildlife Authority; District Environment and Fisheries Officers for Masindi and Gulu districts.

31. Management authority:

According to the 1995 Constitution, wetlands are held in trust for the people by the government. Functionally therefore, Murchison Falls Wetlands System is in the hands of the Central Government. The major part of the system also lies in the protected area Murchison Falls National Park. The National Park is under the management of Uganda Wildlife Authority. For wetlands which are not in protected areas, the 1997 Local Government Act devolved the wetland management to the District Local Governments.

Therefore, the management authorities are:

1. Uganda Wildlife Authority
(Areas within the National Park)
P. O Box 3530,
Kampala
UGANDA
2. Masindi District Local Government
P. O Box 1,
Masindi
UGANDA
3. Gulu District Local Government
P. O Box 2,
Gulu
UGANDA

32. Bibliographical References:

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- Worthington, E. B. 1928.** *A report on the Fishing Survey of Lakes Albert and Kioga.* Cambridge University Press.
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Annex 1: Fishes Recorded for Lake Albert

Polypteridae

Protopterus senegalus
Lepidosirenidae
Protopterus ethiopicus
Mormylidae
Mormyrops anguilloides
Mormyrus niloticus
Marcaceniuss paetherici
Gnathonemus cyprinoides
Mormyrus caschive
Hyperopisus bebe

Characinidae

Hydrocyon forskullii
Hydrocyon lineatus
Alestes dentex
Alestes boreomose
Alestes macrolepidol
Distichodus niloticus
Distichodus rostratus
Citherinus citherius
Citherinus latus

Cyprinidae

Labeo horie
Labeo coubie
Barbus bynni
Barilio niloticus

Clariidae

Clarias lazera
Heterobranchus longifilis

Schilbeidae

Eutopius niloticus

Schilbemystus

Bagridae

Bagrus bayad
Bagrus docmac
Auchenoglamis occidentalis

Mochochidae

Synodontis schall
Synodontis frontofus
Synodontis nigrita

Malopteruridae

Malopterus electricus

Cyprinodontidae

Haplochilus sp.

Centropomidae

Lates albertianus
Lates macrophthalmus

Cichlidae

Tilapia nilotica
Tilapia galilaea
Tilapia zillii
Haplochromis iringalii
Haplochromis albertianus
Haplochromis avium
Haplochromis wingatii (probably also present around the Lake shores since a single specimen from the Albert Nile at Pakwach was preserved and identified by Mr. Tate Regan)

(Source: **Worthington, B. A. 1928.** A Report on the Fishing Survey of Lakes Albert and Kioga. Cambridge University Press.)