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.

MABAMBA BAY WETLAND RAMSAR INFORMATION SHEET (RIS)

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2. **Date:** 18 September 2005.

3. Country: The Republic of Uganda

4. **Name of the Ramsar site:** Mabamba Bay Wetland System

5. Map of the Ramsar site:

Hard copy: attached
Digital (electronic) format: yes

6. **Geographical coordinates:** 32°14' - 32°27' E and 00°02' - 00°12' N.

7. General Location:

Mabamba Bay Wetland System is located west of Entebbe International Airport along the Lake Victoria shores and south of central Uganda, 35 kms south west of Kampala the capital city of Uganda. It is part of Waiya Bay south west of Nakiwogo Bay. It is situated in Wakiso District in the sub-county of Kasanje and Mpigi district in the sub-counties of Kamengo and Mpigi.

8. **Elevation:** 1,150 m above sea level.

9. **Area:** 2,424 hectares.

10. Overview:

Mabamba Bay Wetland System is an extensive marsh stretching through a narrow and long bay fringed with papyrus towards the main body of Lake Victoria. The marsh is dominated by *Cyperus papyrus* and *Miscanthus sp* occasioned with *Loudetia phragmatoides*.
The system supports a lucrative fisheries activity and is therefore a source of fish for home consumption and commercial use. It is a source of raw material for local crafts, building materials, water for domestic and livestock use, as well as non-wood products.

Mabamba Bay Wetland System is the only swamp close to Kampala where one can easily find the globally threatened Shoebill (*Balaeniceps rex*) anytime of the day. Mabamba Bay is part of the wetland system which supports approximately 38% of the global population of the Blue Swallow (*Hirundo atrocaerulea*). The system also supports one other globally threatened bird, the Papyrus Yellow Warbler; and other birds of global conservation concern.

The site is being proposed for listing because of its importance as part of the habitat that supports the Blue Swallow, a stopover for migratory birds, support to lucrative fisheries industry and the existence of globally threatened birds.

11. Ramsar Criteria:

Criteria used to justify wetland include: 2, 4, 5 and 6.

12. Justification for the application of each criterion listed in 11. Above:

Criterion 2: Mabamba Bay supports vulnerable, endangered, or threatened bird species.

Study of water birds of Lake Victoria has revealed the presence of several species of global conservation interest. Mabamba Bay wetland supports several globally threatened bird species. It supports the Blue Swallow, *Hirundo atrocaerulea*, which is a globally vulnerable species (IUCN Red List). The site supports two other globally threatened species of birds namely Shoebill, *Balaeniceps rex* (Vulnerable) and Papyrus Yellow Warbler *Chloropeta gracilirostris* (Vulnerable). The site also supports *Chlidonias leucopterus* (CMS App. II). Other species of conservation interest included in the East African Regional Red List of birds (Bennun and Njoroge, 1996) present in the system include the Spur winged Geese (*Plectropterus gambensis*), Goliath Herons (*Ardea goliath*), Pigmy Geese (*Nettapus auritus*), African Jacana (*Actophilornis africanus*) and several Lesser Jacana (*Microparra capensis*).

Like many papyrus swamps adjacent to Lake Victoria, Mabamba contains the Sitatunga (*Tragelaphus spekei*) (CITES App. III).

Criterion 4: Mabamba Bay Wetland System acts as a refuge for several bird and fish species.

A recent study of waterbirds of Lake Victoria revealed the presence of several species some of which are of conservation interest. Mabamba Bay hosts the Blue Swallow (*Hirundo atrocaerulea)* during certain times of the year. The Blue Swallow breeds in South Africa but migrates to Uganda in areas around Lake Victoria including Mabamba Bay. The system is part of the non-breeding range for the Blue Swallow and therefore important for its survival. The site is important in supporting bird species whose existence is at stake including the Shoebill (*Balaeniceps rex*), Papyrus Gonolek (*Laniarius mufumbiri)* and the Pallid Harrier (*Circus macrourus)*. The site also supports congregatory and migratory species namely Gull-billed Terns (*Gelochelidon nilotica)*; Whiskered Terns (*Chlidonias hybridus)*; White winged Black Terns, (*Chlidonias leucopterus)* and the Grey-headed Gulls (*Larus cirrocephalus*).

The thick macrophyte growth plays an important role in inhibiting the hunting efficiency and dispersal of the Nile Perch. The extremely low levels of dissolved oxygen that characterize the dense interior of papyrus and *Miscanthidium* swamps may also limit exploitation by the Nile Perch since the species has a low tolerance to hypoxia. For that matter, Mabamba wetland supports fish species, which can occur in such conditions especially lungfish and *Clarias*.

Criterion 5: Mabamba Bay Wetland System regularly supports 20,000 or more waterbirds.

Regular waterfowl counts coordinated by ***Nature***Uganda and Wetland Inspection Division from 1999 to 2003 have revealed that Mabamba Bay wetland system supports an average of 189,385 waterbirds. Refer to table under criterion 6.

Criterion 6: Mabamba Bay Wetland System regularly supports 1% of the individuals in a population of one species of waterbirds.

In the most recent four / five year period of bird counts (1999-2003) Mabamba Bay has supported over 1% of the population of the White-winged Black Terns (*Chlidonias leucopterus*) (average of 189,385, i.e. 9.47%).

Year	No. of White-winged Black Tern Counted	1% level	% Population
Feb-99	556,040	20,000	27.8
Feb-00	16,500	20,000	0.83
Nov-01	56,400	20,000	2.8
Nov-03	128,600	20,000	6.4
Average	**189,385**		**9.47**

Table Showing the percentage of Blue Swallow Counted at Sango Bay, Lake Nabugabo, and Mabamba Bay Wetland System.

Site	No. for 2001 survey	No. for 2004 survey	%Average population
Sango Bay System	232	470	17.4
Lake Nabugabo System	215	155	9.2
Mabamba Bay System	101	345	11.1
Total	**548**	**970**	**37.7**

The estimated world population of the Blue Swallow is put at 2012 (Evans SW PhD in prep 2006) recalculated from the 1500 pairs estimate (Birdlife International 2000). The average of the 2001 and 2004 survey results show that the three sites support 37.7% of the world population (Byaruhanga and Evans in prep 2004).

13. Biogeography:

Mabamba Bay is situated in the Lake Victoria Regional mosaic biogeographic zone and exhibits a tropical climate. The predominant vegetation type is a wooded savanna (State of environment report 2002). It falls in the Lakes Kivu, Edwards, George and Victoria (and satellite lakes) Freshwater Ecoregion (from WWF's "Freshwater Ecoregions of Africa" classification).

14. Physical features of the site:

Climate: According to the State of Environment Report (2002), the system falls within the Lake Victoria climatic zone. The air currents such as the southeast and northeast monsoons passing over Lake Victoria influence the climate of Mabamba Bay wetlands System. The system has distinct seasons, the rainy and dry season. The area receives bi-modal high rainfall ranging between 2000-2500mm (State of environment report, 1998).

Mabamba Bay wetland system experiences evapotranspiration ranging between 1,450 – 1,600 mm (State of environment report 1998). The mean minimum temperature is 17.4^{o}C and the maximum mean temperature is 26.7^{o}C.

Hydrology: Mabamba Bay wetland borders the open waters of Lake Victoria. The outflow for Lake Victoria is the Victoria Nile River. The Katonga River flows into Lake Victoria from the western regions of the lake.

Soil types: The Pre-Cambrian Cenozoic – Pleistocene to recent rocks, underlie Mabamba Bay Wetland System. The rocks give rise to ferrallitic soils, which have a dominant red color. The soils are mainly sandy loams and sandy clay loams. According to the Uganda Atlas (1967) the northern Lake Victoria shoreline is underlain by the Buganda-Toro system, which is the most

extensive of the cover formations and occupies much of the south-central and westerly parts. Argillites predominate, but basal or near basal arsenites are an important feature. Locally, as in the Busoga area, one finds thick amphibolites, which are probably derived from basaltic material. Large tracts of the system are granitised; on the other hand low-grade phyllites also occur, particularly towards Lake Victoria in the Southeast.

No information is available on the water quality, soil chemistry, soil pH and sediment characteristics.

15. Physical features of the catchment area:

The catchment is made up of two geomorphic units, the Buganda surface (which dominates) and the miscellaneous alluvie (Aniku, 1996). The geomorphic units make up many of the peculiarities of landscape and soil patterns in the catchment.

The catchment area for Lake Victoria is quite wide cutting across borders with numerous swamps, streams and rivers feeding into the lake. However, the catchment area within the Uganda boundaries and directly linked to Mabamba encompasses the river Katonga basin to the west, and fringes of forest and savannah mosaics to the north of Lake Victoria. The features of the catchment's are relatively similar to those of the site (refer to section 14).

16. Hydrological values:

Mabamba Bay acts as a buffer for Lake Victoria. The system plays an important hydrological role for the waters entering Lake Victoria from the surrounding catchments, by trapping incoming sediments and silt. The wetlands surrounding the Bay also act as flood control areas for the surrounding shoreline. The marshes are breeding grounds for fish. During the dry season, the system maintains a steady discharge of water and supplements the water supply to Lake Victoria.

17. Wetland Type in order of importance:

Tp - (Permanent freshwater marshes) and **O -** (Permanent freshwater lake).

18. General ecological features:

Mabamba Bay Wetland System is adjacent a Medium altitude moist semi-deciduous forest. It is a complex papyrus swamp connected to Makokobe, Kasa and Kasanga papyrus swamps. In the immediate surroundings one also finds Savannah mosaics of medium altitude and Medium altitude moist evergreen forests (*Piptadeniastrum - Albizia - Celtis*).

The major habitat types are open water, papyrus swamp, Marsh and *Miscanthus* swamp. .

It is part of Waiya Bay south west of Nakiwogo Bay. The bay has patches of *Nymphaea nouchali*, *Cladium mariscus* and *Cyperus papyrus* which form the open water fringing vegetation and sometimes with drifting papyrus swamp islands. While *C. papyrus* dominates the swamp edges it gives way to *Miscanthidium violacea* interspersed occasionally with *Loudetia phragmatoides* in the deeper water towards the open water.

Water hyacinth, *Eichornia crassipes* is one of the common invasive plants to Lake Victoria. Three Tilapiine species, *Orechcromis niloticus* (Nile Tilapia), *Oreochromis leucosticus* and *Tilapia zillii* (Zilli's Tilapia) were introduced in Lake Victoria in 1950s, and Nile perch, *Lates niloticus* during the 1960s.

19. Noteworthy flora:

The marsh is dominated by *C. papyrus* and *Miscanthus sp*. occasioned with *L. phragmatoides*. The bay has patches of *Nymphaea nouchali*, *C. mariscus* and *C. papyrus* that form the open water fringing vegetation, while *C. papyrus* dominates the swamp edges giving way to *M. violaceus* interspersed occasionally with *L. phragmatoides* in the deeper water towards the open water.

20. Noteworthy fauna:

Mabamba bay hosts a number of small rodents but *Otomys tropicalis* has been recorded as being rare in the Bay. Among the shrews *Crocidura selina* and *Mylomys dybowskii* have also been recorded as being uncommon. The collection of butterflies from Mabamba bay is enormous with over 200 species recorded. *Abisara neavei*, *Acraea aganice*, *Acraea aurivilli*, *Acraea consanquinea*, and *Bicyclus sebetus* are some of the very rare butterfly species that have been only recorded in Mabamba Bay. The system hosts globally threatened bird species for example the Shoebill (*Balaeniceps rex*), Papyrus Gonolek (*Laniarius mufumbiri*), Pallid Harrier (*Circus macrourus*), Blue Swallow (*Hirundo atrocaaerulea*), Gull-billed Terns (*Gelochelidon nilotica*), Whiskered Terns (*Chlidonias hybridus*) and white Winged Black Terns (*Chlidonias leucopterus*). Over 190 different bird species are known from the swamp, among which are wetland-dependent and Papyrus endemic species.

21. Social and cultural values:

Mabamba Bay has about 6 landing sites, all having lucrative fisheries activities. The bay also serves as a source of raw materials for local crafts, building, water for domestic use and fish for both subsistence consumption and as a source of income. Part of the bay is forested and the forests are used for wood and non-wood products. One of the commercial activities in the forests is charcoal burning.

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. The Government therefore owns the Mabamba Bay wetlands System.

b) In the surrounding area:
In the surrounding areas, the ownership is mainly by Mailo (a land tenure system where registered land is held in perpetuity) and Customary (a system of land tenure regulated by customary rules which are limited in their operation to a particular description or class of people) ownership.

23. Current land (including water) use:

Land uses within the Ramsar Site

Mabamba wetlands are mainly used for fishing. The area is also used for both livestock and domestic water supply. Wetland plants from the area are used for crafts, a lucrative activity for surrounding local communities. Forestry related activities are also predominant in the swamp Forests.

Land uses within the surrounding / catchment areas

In the catchments around the wetland area, there is subsistence agricultural farming. Horticultural farming is flourishing along the shores of Lake Victoria, including areas neighboring Mabamba Bay and the location of Mabamba creates potential for horticultural farming.

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 site

The dry season incursion into the swamp by fishermen, some of whom build huts in the swamp and stay there, even keeping animals such as pigs in the interior of the swamp, needs to be regulated, as should the hunting of the Sitatunga by local people.

The surrounding communities are reportedly breeding the Shoebill and the local people sometimes collect the young birds for raising and to be eventually sold. This has not been very successful because of the specialized feeding habits of the birds, and as they grow they become expensive to feed. The Shoebill feeds primarily on Lungfish *Protopterus aethiopicus,* which is also cherished by the local community.

The other major conservation issue affecting the site is the proliferation of the water Hyacinth *Eichhornia crassipes,* although this has declined in much of the Lake Victoria area during 1998 –

1999. Few detailed studies have been carried out to establish how the weed affects wetlands such as these, but studies elsewhere on Lake Victoria show that certain macrophytes and macro-invertebrates may be adversely affected. This may, in turn, have an impact on birds.

Threats from outside the site

The proliferation of flower farms along the shores of Lake Victoria and the use of agrochemicals is likely to have an impact on the ecology of Mabamba Bay and its associated wetlands and waters.

25. Conservation measures taken:

Like most of the wetlands in Uganda, Mabamba Bay enjoys the support and protection of the National Wetlands Policy (1995) and other national legislation with wetland related provisions. Such legislations include the Constitution of the Republic of Uganda 1995, the Local Government Act 1997, the Water Statute 1995, the Land Act 1998, and the National Environment Statute 1995.

Mabamba Bay is one of Uganda's 30 Important Bird Areas (IBAs), due to the presence of congregatory and globally threatened bird species in the area. ***Nature*** Uganda spearheaded the development of a National Important Bird Areas Conservation Strategy (NIBACS) that highlights measures and strategies for the conservation of the Bay. The vision for the NIBACS is a harmonious relationship between people and birds. It aims at conserving biodiversity for sustainable livelihoods. The strategy focuses on strengthening mechanisms for institutional collaboration, establishing mechanisms for effective conservation actions at IBA's, increase knowledge and awareness about Important Bird Areas, and promoting sustainable utilization of important bird areas resources for development among others.

26. Conservation measures proposed but not yet implemented:

The Wetland Inspection Division is in the process of developing a community-based wetland management plan for the area. A draft management plan was developed with the full participation of the local community and local government's right from village level (Local Council I) to the district (Local Council 5). The draft management plan is currently under review.

27. Current scientific research and facilities:

NatureUganda has a regular monitoring programme of the water birds at Lutembe including Mabamba Bay. Makerere University Institute of Environment and Natural Resources (MUIENR) conducted a Biodiversity assessment, considering major taxa around Mabamba including birds, plants, butterflies, and dragonflies. There is no field station in Mabamba. However, a number of research stations exist in the nearby Entebbe and Kampala towns.

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

A number of NGOs have been conducting conservation education activities around Mabamba Bay wetland system. ***Nature***Uganda has carried out mobilization and sensitization activities right from grassroot levels around Mabamba. One of the significant wildlife education centers in Uganda, the Uganda Wildlife Education Center Entebbe, is only about 3 km from Mabamba.

29. Current recreation and tourism:

Mabamba Bay has gained popularity for eco-tourism especially due to the presence of the Shoebill in the area and other interesting birds such as the Papyrus endemic species. The local communities in the area have formed a tour guide group, which has taken great strides to promote income generation from tourism and associated activities. ***Nature***Uganda is also talking to Wakiso District Administration about the possibility of a wetland Reserve for ecotourism in Mabamba Bay.

30. Jurisdiction:

a) Territorial – Wakiso District Local Government and its lower councils
b) Functional – National Environment Management Authority, District Environment Officers, District Fisheries Officers and Wetlands Inspection Division.

31. Management authority:

According to the 1995 Constitution, the government holds wetlands in trust for the people. Functionally therefore, Mabamba Bay wetlands 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:

1. Wakiso District Local Government
(Kasanje Sub-county)
P. O Box 7218,
Wakiso
UGANDA

And

2. Mpigi District Local Government
(Kamengo and Mpigi Sub-counties)
P. O Box 172

Mpigi
UGANDA.

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