

# 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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## Nabajuzi 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:** Nabajuzi Wetland System

### 5. Map of the Ramsar Site:

Hard copy: attached  
Digital (electronic) format: yes

**6. Geographical coordinates:** 31°33' – 31°49" E and 00°27" S – 00°05" N.

### 7. General Location:

Nabajuzi wetland system lies south west of central Uganda in Masaka district (Lwabenge, Kyamulibwa, Kalungu, Mukungwe, Nyendo, Kimanya, Katwe, Kingo, Kibinge, Butenga and Bigasa sub-counties), Sembabule district (Mijwala sub-county) and Mpigi district (Kabulasoke sub-county). It stretches up to the Kagera River basin area to the north and past the periphery of Masaka Town Municipal Council along Masaka – Mbarara highway to the south.

**8. Elevation:** 1,200 – 1,300 m above sea level.

**9. Area:** 1,753 hectares.

**10. Overview:**

Nabajjuzi wetland lies in the traditional Buddu county of Buganda Kingdom. Some of the flora and fauna contained in the wetland are closely associated with the cultural norms and traditions especially the totems. Because of this, there is considerable cultural attachment of the surrounding areas to the wetland.

Nabajjuzi is dominated by *Cyperus papyrus* with patches of *Miscanthus violaceus* in most parts. In the swamp interior are also communities of *Kostchya sp.*, a common shrub in *C. papyrus* swamps. There are also small open water pools supporting *Nymphaea nouchali var. caerulea*.

The system is a long narrow stretch of swamp from the periphery of Masaka Municipal Council to the major Katonga River system. The wetland is the source of water supply for Masaka Town Council and the immediate townships such as Kyabakuza-Kimanya. The system is also a source of fish, clay, papyrus and other crafts materials and game meat (Sitatunga). The local community with the help of *Nature*Uganda has initiated eco-tourism activities in the wetland.

Nabajjuzi wetland has been relatively intact over the past few years. The array of resources extracted from the wetland has been the same but over the last twenty years there has been increased commercialisation of the resource products hence increased resource off-take. Some of the surrounding areas have been modified and are built up into trading centres and small towns and this has further caused an increase in demand for resources.

Nabajjuzi Wetland system is being proposed for listing because of its support to globally threatened bird species and the endangered Sitatunga, being a source of water for surrounding towns and its importance as a spawning ground for mudfish and lungfish.

**11. Ramsar Criteria:**

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

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

**Criterion 2: Nabajjuzi Wetlands System supports globally vulnerable and threatened birds.**

Nabajjuzi Wetland System is important regionally and globally for conservation of vulnerable and threatened species of birds and other animals. The Shoebill (*Balaeniceps rex*) (vulnerable) has been recorded in Nabajjuzi. Two papyrus endemic species have also been recorded in the wetland system, the Papyrus Gonolek (*Laniarius mufumbiri*) (near-threatened) and the Papyrus Yellow Warbler (*Chloropeta*

*gracilirostris*) (Vulnerable). The Papyrus Yellow Warbler is a Lake Victoria Biome species.

Nabajjuzi wetland system also supports the Grey Crowned Crane (*Balearica regulorum*) (CITES App. II) whose conservation status in Uganda is at stake because of the pressure on its breeding ground, the seasonal wetlands. The Sitatunga (*Tragelaphus spekei*) (CITES App. III), an antelope that inhabits wetlands, also occur in Nabajjuzi wetland. Currently the Sitatunga though not threatened is coming under increasing pressure due to threats on its habitat.

**Criterion 3: Nabajjuzi Wetland system supports populations of plant and animal species important for maintaining the biological diversity of the region.**

Little is known about the Nabajjuzi System. However, it is important regionally and globally for biodiversity conservation. Key species such as Sitatunga, Grey Crowned Crane, Shoebill, papyrus endemic species such as Papyrus Gonolek and Papyrus Yellow Warbler are known from this site and hence the site is important in maintaining the biological diversity of the above-mentioned species.

The system is also famous for two fish species indigenous to its waters, the Mudfish *Clarias mossambicus* and Lungfish *Protopterus aethiopicus*.

**Criterion 8: Nabajjuzi Wetlands System is an Important spawning ground and nursery on which fish stocks within the wetland depend.**

Nabajjuzi wetlands system is a spawning ground for two fish species, the Mudfish *Clarias mossambicus* and Lungfish *Protopterus aethiopicus*. The species are known to spawn in the wetland system on the onset of the rainy season.

**13. Biogeography:**

The Nabajjuzi wetland System lies predominantly in the Lake Victoria Regional Mosaic biogeographical zone. The predominant vegetation is mainly the wooded Savanna with Acacia / Commiphora thicket and grasslands (Stuart, S. N. *et al*, 1990).

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

**Climate:** Nabajjuzi wetland system is found in the Lake Victoria Climatic zone (State of Environment Report, 2002). The climate is tropical in nature. The seasons are fairly well-marked as rainy and dry seasons. Nabajjuzi experiences a bi-modal, high rainfall pattern with peak rains between March – May and October – November, with totals ranging between 1500 to 2000 mm (State of environment report 1998). The system experiences an evapotranspiration ranging between 1450 – 1600 mm (State of Environment Report, 1998). . During the rainy seasons the rain-fed seasonal wetlands are flooded.

**Geology and Soils:** Pre-Cambrian rocks underlie Nabajjuzi wetland system. The rocks are a mixture of Cenozoic Pleistocene to recent rocks; Buganda – Toro System

and wholly granitized rocks comprising the granitoid and highly granitized rocks. For the Buganda – Toro series, argillites predominate, but basal or near basal arenites are an important feature. The soils are predominantly ferrallitic mainly composed of sandy loams. The soils are either shallow humose loams overlying phyllite rubble (yellow in colour, very acid and less fertile); or red sandy clay loams often underlain by soft laterite. The soils in the wetlands include grey humose clays, grey coarse sands and peaty sands and clays. The parent material to these soils is river alluvium, lake deposits and papyrus residue respectively.

**Hydrology:** Nabajjuzi wetland contains Nabajjuzi River which flows northwards. The swamp receives water from wetland tributaries, which include Gambuzi, Ndibatamadu, Ksaba, Lusamatu, Kabuka, Mugumba, Nalongo, and drains into the Katonga wetland.

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

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

Three geomorphic units comprise Nabajjuzi wetland system, the Ankole and Koki surface, strongly dissected Buganda surface and Upwarped Tanganyika surface (Aniku, 1996). The geomorphic units make up many of the peculiarities of landscape and soil patterns in the catchment. The catchment is made up of flat-topped hills and intervening valleys. The intervening valleys form the drainage system in which the rivers drain and link to the Kagera Rivers basin. The features of the catchment are relatively similar to those of the site (refer to section 14).

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

The system plays an important hydrological role for the waters entering the ecosystem and people living in the nearby areas. It controls floods from the runoff entering the system from the nearby catchments and acts as a natural filter for the silt and sediments contained therein. This helps to purify the surface run-off and maintain the natural clean water conditions before joining River Katonga. During the dry season, the system maintains a steady discharge of water and supplements the water supply to the surrounding areas. It also stores water for groundwater recharge. The wetland plays an important role in stabilizing the banks of River Nabajjuzi.

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

**Tp** - (Permanent freshwater marshes) **P** – (Seasonally flooded plains); **M** – (Riverine Swamps), **Xf** – (Swamp forest).

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

Nabajjuzi wetland is dominated by *Cyperus papyrus* with patches of *Miscanthus violaceus* in most parts. In the swamp interior are also communities of *Kostchya sp.*, a common shrub in *C. papyrus* swamps. At the edges of the wetland are such species as *Alchornea sp.*, *Phoenix reclinata*, *Cyperus denudatus*, *Dissotis trothae*, *Pennisetum purpureum*, *Harungana madagascariensis*, *Erythrina abyssinica*, *Ludwigia abyssinica*, *Afromomum sp.*, and *Triumfetta brachyceras*. There are also small open pools of water supporting *Nymphaea nouchali var. caerulea* and at the edges of these *Fimbristylis sp.*, *Loudetia phragmitoides* are found.

The wetland types based on dominant plants include freshwater emergent reed swamps dominated by single reed species (*papyrus*, *Loudetia sp.* and *Miscanthus sp.*); seasonally flooded herbaceous wetlands where species composition is variable; seasonally flooded wooded grassland; freshwater floating leaved but rooted vegetation and freshwater rooted macrophytes.

These species are tolerant to soils that are acidic and deficient of plant nutrients. The seasonal floodplains are mainly wooded grasslands with *Acacia sp.* trees, which in certain instances form dense bushes.

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

Nabajjuzi wetland contains 9 species of wetland-dependent plant species belonging to 8 genera. There is no record so far of any unique plant.

#### **20. Noteworthy fauna:**

Nabajjuzi wetland is one of the sites identified by the Wetlands Inventory Team of the National Wetlands Conservation and Management Programme (now Wetlands Inspection Division) as one of the sites important for the conservation of birds in Uganda. Noteworthy species include the Shoebill, Papyrus Gonolek and the Papyrus Yellow Warbler. Other fauna include the Sitatunga *Tragelaphus spekei*. Two species of fish, which constitute the fisheries industry of the area and worthy of noting, are Mudfish *Clarias mossambicus* and Lungfish *Protopterus aethiopicus*.

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

Much of the population living around Nabajjuzi wetland is predominantly suburban living in Masaka municipality as well as townships in the immediate neighbourhoods making a culturally diverse community. Close to the wetland is a military barracks whose occupants interact enormously with the wetland and its resources. Occasionally military personnel hunt for the Sitatunga in the wetland. However, to the extreme northern part of the wetland is a typical rural community set-up with subsistence mode of lifestyle.

The communities around Nabajjuzi wetland use a range of resources from the wetlands including plant materials for thatching, medicine and crafts, water, fish, game meat (Sitatunga). The wetland plays an important role in the socio-economic

aspects of the local communities and the urban dwellers. Water is one of the critical resources that are extracted from the wetland. The Water supply for Masaka Municipality and surrounding communities depends on the wetland. The wetland is a source of Mudfish (Mmale) *Clarias* and Lungfish (Mamba) *Protopterus*.

There is evidence of wetland edge cultivation with a potential for wetland encroachment. Much of the papyrus obtained from the wetland is used for handcraft production especially carpets, mats and baskets. These are mainly sold off in the nearby trading centres.

There has been increasing community eco-tourism especially bird-watching based on the wetland, Water birds and the Sitatunga.

Some of the flora and fauna contained in the wetland are closely associated with the cultural norms and traditions especially the totems. Because of this, the local community is associated to the wetland because of their totems species it supports.

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

Land tenure system in the surrounding areas is mainly mailo land (a land tenure system where registered land is held in perpetuity) and to some extent lease holdings especially in the urban set-up of the Masaka Municipal Council. However, according to the 1995 constitution, the government of Uganda, which holds the wetlands in trust for the people, owns all the wetlands in the country.

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

### *Land use within the Site*

The policy regarding wetlands permits regulated access and use of the wetland resources in accordance with set guidelines as developed by the Uganda Wetlands Inspection Division. There is considerable use of resources from Nabajjuzi wetland System by communities residing near and far from the wetlands. Used resources include, but are not limited to water (both small and large scale), papyrus and other plant materials, fishing and hunting the Sitatunga.

The Masaka Municipal Council and surrounding communities outside the municipal council draw water from the wetland for domestic use as well as for watering their livestock. The *Papyrus*, *Loudezia sp* etc are harvested and used in crafts making including fishing baskets, mats, chairs etc. The surrounding communities hunt the Sitatunga for its meat. Grazing of dairy cattle is carried out especially in the seasonal floodplains. Parts of the wetlands have been converted for construction of settlements and subsistence cultivation.

### *Land use outside the site*

There is a nearby growing trading centre and several settlements have been constructed. Amongst these are the army barracks and a leather tannery. In some areas close to the wetland, there is sand extraction.

**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*

Nabajjuzi wetland is an Important Bird Area because of the presence of globally threatened species namely the Papyrus Gonolek, the Shoebill and the Papyrus Yellow Warbler. Degradation of the wetland is likely to negatively affect the conservation of the globally threatened birds within the wetland.

Nabajjuzi wetland is threatened by the rapidly growing commercialisation of wetland resources. The demand for crafts materials in the nearby centres has considerably increased. This has in turn increased the levels of extraction of raw materials from the wetland. Hunting of the Sitatunga for meat especially by the military personnel is of particular concern.

*Threats from outside the site*

The rapidly growing urban centres in the areas adjacent to the wetland pose a great risk of degradation to this wetland. There is considerable conversion of the wetland for settlement and cultivation. The expansion of the town and trading centres are a potential threat to the wetland as it is located between Masaka and the nearby small towns. Cultivation on the edge of the wetland is also rampant. Exploitation of the wetland requires proper mechanisms to avert the degradation.

Water pollution from the tannery situated on an area of about 10 acres of land adjacent to the wetland is a big threat to Nabajjuzi wetland. This tannery was built a few meters from the wetland edge. The effluents from the tannery are discharged directly into the wetland and this is a big pollutant that is likely to cause biodiversity loss, changes in water quality and threats to public health, generally compromising the ecosystem health and impairing the ecological functioning of the wetland. The communities living nearby draw their water from the same wetland and some of the springs are quite close to the points of discharge. The Masaka Municipal Council waterworks are also situated only a few hundred meters away from the tannery. There are also open troughs containing the refuse. This poses a health hazard and life threat to the communities. It was not clear whether an Environmental Impact Assessment or environment audit were done.

**25. Conservation measures taken:**

Wetlands Inspection Division (WID) and NGOs such as *Nature*Uganda are implementing conservation activities in and around Nabajjuzi Wetland.

Wetlands Inspection Division is providing the overall framework for wetland conservation. *Nature*Uganda has been supporting Masaka Youth Development Organization (MAYODO) a community-based organization to implement a community-based tourism initiative as a motivation for community participation in

the overall management and conservation of Nabajjuzi wetland. A preliminary biodiversity assessment has also been conducted.

VI Agro-forestry Project a non-governmental organization working in the area of agro-forestry has a demonstration site within the vicinity of Nabajjuzi wetland. The purpose of the demonstration is to educate farmers in environmentally sound farming techniques such as mulching and intercropping that conserve the soils and water while at the same time improve yields.

The National Environment Management Authority (NEMA) and the Wetlands Inspection Division (WID) conducted an environmental audit and recommended that treatment plant for the effluent be put in place. Since then the proprietor has complied by implementing the recommendations which are being closely monitored by NEMA and WID.

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

Wetlands Inspection Division in partnership with *Nature*Uganda has supported Masaka Municipality to develop a community based management plan for Nabajjuzi Wetland. The plan has been completed with the full participation of the local community and Masaka local government staff. The major highlights of the management plan include ecotourism development, fish farming, tree planting and wetland edge gardening.

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

*Nature*Uganda has been conducting bird monitoring in Nabajjuzi wetland being part of the Important Bird Areas network for Uganda. The Wetlands Conservation and Management Programme conducted a flora and fauna biodiversity inventory of Nabajjuzi wetland in 1996.

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

*Nature*Uganda has been implementing an Environment Education programme with Schools and tertiary institutions in the Nabajjuzi catchment area since 2004. The programme aims at increasing wetland conservation efforts and increasing awareness of key issues in wetland conservation and sustainable management.

Also *Nature*Uganda with funding from the Royal Society for the Protection of Birds (RSPB), Whitley and Uganda Tourism Board (UTB) have initiated several sustainable resource use and development projects in Nabajjuzi wetland. The project aims at education and awareness of the local communities of the benefits of the wetland to them, and also realising sustainable income from the resources within the wetland. Local communities are already implementing income generating activities, among them including beekeeping, piggery and crafts making. Beehives have already been colonized. Goat rearing is also in the process of being implemented.



It is important to note that the Water supply for Masaka Municipality and surrounding communities depends on the wetland.

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

A bird observatory has been constructed by *Nature*Uganda to promote eco-tourism in the area. Following *Nature*Uganda's initiatives, there have been increasing community eco-tourism activities especially based on wetland birds and the Sitatunga. The number of tourists visiting Nabajjuzi bird observatory has been steadily increasing since its launch. In 2005, approximately 250 tourists visited the observatory. The figure includes local visitors (40%) and foreign visitors (60%).

### **30. Jurisdiction:**

#### *a) Territorial jurisdiction*

Masaka District Local Government and its lower councils.

#### *b) Functional jurisdiction*

National Environment Management Authority, District Environment Officers, District Fisheries Officers and Wetlands Inspection Division.

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

According to the 1995 Constitution, wetlands are held in trust for the people by the government. Functionally therefore, Nabajjuzi 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:

1. Masaka District Local Government  
(Lwabenge, Kyamulibwa, Kalungu, Mukungwe, Nyendo, Kimanya, Katwe, Kingo, Kibinge, Butenga and Bigasa sub-counties)  
P. O Box 634,  
Masaka  
UGANDA
2. Mpigi District Local Government  
(Kabulasoke sub-county)  
P. O Box 172,  
Mpigi  
UGANDA
3. Sembabule District Local Government  
(Mijwala sub-county)

P. O Box 635,  
Sembabule  
UGANDA

### **32. Bibliographical References:**

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