Ramsar Information Sheet

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Rwanda

Rugezi-Burera-Ruhondo

Designation date	12 January 2005
Site number	1589
Coordinates	01°28'29"S 29°53'09"E
Area	6 736,00 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

Rugezi marsh is located in an inundated valley in the north of Rwanda on Uganda border, to the East of Lake Burera, at 2,050 m of altitude. The Marsh covers an area of 6,736 ha and extends between 1° 21'30''and 1°36'11''of South Latitude and 29°49'59''and 29°59'50'' East Longitude.
Rugezi marsh is a unique and important ecosystem where functionality or dysfunction has large local, regional and global consequences. The Rugezi Marsh is an important element in Akagera River and Nil systems. The importance of the Rugezi marsh is very significant to the economy and conservation services due to its support to hydro-power generation downstream of the marsh and bird conservation services for tourism promotion.
The vegetation of the marsh is dominated by Miscanthidium violaceum accompanied by Vaccinium stanleyi, Erica sp. and Xyris vallida. This marsh covers part of the Important Bird Area including Grauer's Swamp-warbler (Bradypterus graueri), Grey Crowned Crane listed as endangered species other threatened bird species including Papyrus Yellow Warbler "Bradypterus carpalis".
In the past, until 2009, Rigezi marsh faced the illegal agricultural activities, livestock grazing and poaching. Today, the wetland has been restored and the water levels are back to original levels. This successful restoration has gained international recognition and Rwanda received the Green Globe Award in October 2010 in recognition to restore the Rugezi marsh.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Name	NGABOYAMAHINA Theogene
Institution/agency	Rwanda Environment Management Authority (REMA)
Postal address	PO Box 7436 Kigali / Rwanda tngabo@rema.gov.rw www.rema.gov.rw
E-mail	tngabo@rema.gov.rw
Phone	+2500788567158
Fax	+250580017

2.1.2 - Period of collection of data and information used to compile the RIS

From year	2005
To year	2008

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Rugezi-Burera-Ruhondo
Unofficial name (optional)	Rugezi

2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary	Yes ○ No ◉
(Update) B. Changes to Site area	No change to area

2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?	No

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<1 file(s) uploaded>

2.2.2 - General location

a) In which large administrative region does the site lie?	Burera and Gicumbi Districts
b) What is the nearest town or population centre?	Musanze City

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries?	Yes ○ No ◉
b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party?	Yes ○ No ◉

2.2.4 - Area of the Site

Official area, in hectares (ha):	6736
Area, in hectares (ha) as calculated from GIS boundaries	6867.85

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	Shaba
WWF Terrestrial Ecoregions	

Other biogeographic regionalisation scheme: The partitioning of Africa: statistically defined biogeographical regions in subISaharan Africa: Shaba region

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided	The wetland receives water from a number of streams and from a big tributary known as Rwangabavu passing through the wetland to the North –west of the wetland of the country. The pH of Rugezi water which flows to Lake Burera through Rusumo fall varies between 4.6 to 6.2. The falls are 200 meters (Deuse, 1966).
Other ecosystem services provided	The major part of the wetland and other secondary wetlands are used for agricultural purposes characterized by artificial drainage. A number of water channels transverse the main wetland and are used by the local population for transport purposes. Recharges Burera and Ruhondo lakes downstream,which are the main points for hydro power generation in Rwanda. Rugezi purify and replenish water, act as a water reserve, and biodiversity reserve
Other reasons	Rugezi is peat land and contribute carbon storing , therefore helping in mitigation and to climate change effects.

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 6 : >1% waterbird population

3.2 - Plant species whose presence relates to the international importance of the site

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Disa stairsii		☑	☐	☐	EN	☐		

The vegetation of the marsh is dominated by Miscanthidium violaceum accompanied by Vaccinium stanleyi, Erica sp. and Xyris vallida. The swamp downstream is disturbed by agriculture and there is the presence of anthropic vegetation including stands of Cyperus latifolius and Cyperus papyrus accompanied by Juncus oxycarpus, Crassocephalum sp., Dicrocephala and Spilanthes

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA / AVES	*Anas undulata*	Yellow-billed Duck	☐	☐	☑	☐	☐	☐	☐	☐	8460000	2012	80	LC	☐	☐	stable	The overall population trend is stable
CHORDATA / AVES	*Balearica regulorum*	Grey Crowned Crane	☐	☐	☑	☐	☐	☐	☐	☐	50000	2004	50	EN	☐	☐	Decreasing	Declines are attributed primarily to habitat loss and fragmentation and illegal removal of birds and eggs from the wild for food, traditional use, domestication and the international illegal trade market.
CHORDATA / AVES	*Bradypterus graueri*	Grauer's Swamp Warbler	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐		
CHORDATA / AVES	*Chloropeta gracilirostris*	Papyrus Yellow Warbler	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐		

A great number of large water birds including Yellow-billed Duck, African Wattled Lapwing, African Jacana, Long-toed Lapwing, Knob-billed Duck, African Spoonbill and Rufous-bellied Heron are found in central and southern parts where the quantity of water is still moderate.

Bradypterus graueri is found in Rwanda, Burundi, eastern Democratic Republic of Congo (DRC) and south-western Uganda. In Rwanda, it occurs in Rugezi Swamp (Vande Weghe 1983). This species has a very small and severely fragmented area of occupancy within its small overall range. Many sites are being converted to cultivation or pasture. Thus the species's area of occupancy is declining and, by inference, so is the number of mature individuals. It is therefore classified as Endangered.

3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Albertine Rift Montane Forests	☑	The site was classified as Important Bird Area by Birdlife international. The site covers many water birds of the Albertine Rift Montane Forests. (6 of the 11 water bird species restricted to the Lake Victoria Basin biome were recorded at this site	

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

Rugezi wetland is an important Bird area and home of important wildlife both animals and plants. The vegetation of the marsh is dominated by Miscanthidium violaceum accompanied by Vaccinium stanleyi, Erica sp. and Xyris vallida. The swamp downstream is disturbed by agriculture and there is the presence of anthropic vegetation including stands of Cyperus latifolius and Cyperus papyrus
Rugezi wetlands is a unique and important ecosystem where functionality or dysfunction has large local, regional and global consequences.

The waters from the area feed the White Nile and the Congo Rivers. Hydroelectricity generated from this area is an important source of energy for Rwanda. When fully functional this area is an important carbon sink as well as a vital hydrological reservoir.

4.2 - What wetland type(s) are in the site?

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands	Rugezi	1	6736	Representative

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
islands	

(ECD) Habitat connectivity: Rugezi marshland is connected to Burera and Ruhondo lakes dowstream

4.3 - Biological components

4.3.1 - Plant species

<no data available>

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/MAMMALIA	Tragelaphus spekii	sitatunga	170000	2008		Sitatunga is rare in Rugezi due to intensive meat hunting

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
A: Tropical humid climate	Am: Tropical monsoonal (Short dry season; heavy monsoonal rains in other months)

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 2050

Upper part of river basin: ☑

More than one river basin: ☑

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.: Nyabarongo and Akagera river basin

4.4.3 - Soil

Mineral: ☑

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes ○ No ◉

Please provide further information on the soil (optional): Made of soils from volcanic materials which are principally composed of three soil types; (1)Mineral soils, Cambique soils which are very poorly drained forming a variable soil texture (2) Highly decomposed organic soils poorly drained (3) Partially decomposed organic soils also poorly drained.

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	increase

Water destination

Presence?	Changes at RIS update
To downstream catchment	No change

Stability of water regime

Presence?	Changes at RIS update
Water levels largely stable	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology:

The wetland receives water from a number of streams and from a big tributary known as Rwangabavu passing through the wetland to the North –west of the wetland of the country. The pH of Rugezi water which flows to Lake Bulera through Rusumo fall varies between 4.6 to 6.2. The falls are 200 meters (Deuse, 1966).
The major part of the wetland and other secondary wetlands are used for agricultural purposes characterised by artificial drainage. A number of water channels transverse the main wetland and are used by the local population for transport purposes

(ECD) Connectivity of surface waters and of groundwater

The Rugezi Marsh is an important element in Akagera River and Nil systems. From its hydrological aspects, Rugezi complex plays a major role in the regulation of water flow to Burera and Ruhondo Lakes, with the runoff from this Marsh contributes to 50% of

4.4.5 - Sediment regime

<no data available>

4.4.6 - Water pH

<no data available>

4.4.7 - Water salinity

<no data available>

4.4.8 - Dissolved or suspended nutrients in water

<no data available>

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself:

i) broadly similar ○ ii) significantly different ◉

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Low
Genetic materials	Medicinal products	Low

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High
Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	not relevant for site
Erosion protection	Soil, sediment and nutrient retention	High
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climactic processes	Medium
Biological control of pests and disease	Support of predators of agricultural pests (e.g., birds feeding on locusts)	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	Medium
Spiritual and inspirational	Spiritual and religious values	Medium
Spiritual and inspirational	Aesthetic and sense of place values	Medium

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Sediment retention	High
Nutrient cycling	Carbon storage/sequestration	High

Other ecosystem service(s) not included above: The Rugezi Marsh is an important element in Akagera River and Nil systems. From its hydrological aspects, Rugezi complex plays a major role in the regulation of water flow to Burera and Ruhondo Lakes, with the runoff from this Marsh contributes to 50% of inflow in the Lake Bulera (Hategekimana, 2005). The two lakes, Burela andNtaruka, constitutes the main source of the electricity used in Rwanda. After producing this electricity, the water feeds the Nyabarongo river, one of the big rivers generating Akagera River.

Outside the site: 120,000

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ◉ No ○ Unknown ○

Where economic studies or assessments of economic valuation have been undertaken at the site, it would be helpful to provide information on where the results of such studies may be located (e.g. website links, citation of published literature): REMA/UNEP/UNDP, Economic Analysis of Natural Resouces use in Rwanda, case of Rugezi Wetland (2011)

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland ☑

Description if applicable: Rugezi wetland is a good example for Rwanda in conservation effort of wise use and restoration of wetlands. In 2010, Rwanda won Green Globe Award for the restoration of Rugezi-Burera-Ruhondo wetlands.

ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland ☑

Description if applicable: Culture and religious ceremony of NYABINGI

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples ☑

Description if applicable: With the passing years, Rugezi marsh was degraded by diverse activities among others agriculture, fire, and over exploitation of non timber forests products. In 2000s, the marsh was affected by an environmental crisis related to water level fall and sedimentation. Different illegal activities have been noted in Rugezi including grass cutting, and illegal fishing, trade of chicks of Grey Crowned Crane. In 2003, almost 56% of the swamp was destroyed by agriculture and grazing activities (MINITERE 2003). However, in 2010 , Rwanda made a great effort in the restoration of Rugezi wetland.

iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland ☑

Description if applicable: For instance , they are some cultural site and currently Rugezi is becoming a recreational tourism center especially for bird watching.

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	☑	☐

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Cooperative/collective (e.g., farmers cooperative)	☐	☑

Provide further information on the land tenure / ownership regime (optional): All wetlands are government owned including the Ramsar site.
Areas located 20 meters and above are privately owned by individuals
Day to day management done by the Sector and District authorities but overall management is under the jurisdiction of REMA (Rwanda Environmental Management Authority).

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: At local level, Rugezi Wetlands is managed by the District of of Burera and Gicumbi. At national level, all wetlands are under supervision of Ministry of Environment and natural Resouces

Provide the name and title of the person or people with responsibility for the wetland: The Director General - Rwanda Environment Management Authority

Postal address: P.O.BOX. 7436

E-mail address: remainfo@rema.gov.rw

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified development	Low impact	Low impact	☐	No change	☑	No change

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Drainage	Low impact	Low impact	☑	No change	☐	No change

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Livestock farming and ranching	Medium impact	Low impact	☑	No change	☑	No change

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Hunting and collecting terrestrial animals	Low impact	Low impact	☑	No change	☑	No change

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Recreational and tourism activities	Low impact	Low impact	☐	No change	☑	No change

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Vegetation clearance/ land conversion	Low impact	Low impact	☑	No change	☐	No change

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Invasive non-native/ alien species	Low impact		☐	No change	☑	No change

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified	Low impact		☐	No change	☑	No change

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Temperature extremes	Low impact		☐	No change	☑	No change

5.2.2 - Legal conservation status

Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Other international designation	important Bird area by Birdlife international		whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	No. RW001 (Rugezi Marsh),		whole

5.2.3 - IUCN protected areas categories (2008)

V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☑

5.2.4 - Key conservation measures

Habitat

Measures	Status
Hydrology management/restoration	Implemented

Species

Measures	Status
Threatened/rare species management programmes	Implemented

Human Activities

Measures	Status
Regulation/management of recreational activities	Partially implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes ○ No ◉

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes ○ No ◉

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Please select a value

5.2.7 - Monitoring implemented or proposed

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Albertine Rift Conservation Society(ARCOS) 2013, Biodiversity survey of the Rugezi marsh

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<1 file(s) uploaded>

ii. a detailed Ecological Character Description (ECD) (in a national format)
<no file available>

iii. a description of the site in a national or regional wetland inventory
<no file available>

iv. relevant Article 3.2 reports
<1 file(s) uploaded>

v. site management plan
<1 file(s) uploaded>

vi. other published literature
<no file available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

Rugezi picture (*ARCOS, 04-01-2012*)

Rugezi picture (*ARCOS, 04-01-2012*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Transboundary Designation letter
<no file available>

Date of Designation: 2005-01-12