

Information Sheet on Ramsar Wetlands (RIS) – 2006-2008 version

Available for download from http://www.ramsar.org/ris/key_ris_index.htm.

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th Conference of the Contracting Parties (2005).

Notes 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. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

18/04/06

3. Country:

Zambia

4. Name of the Ramsar site:

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

Busanga Swamps

5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only):

- a) Designation of a new Ramsar site ; or
b) Updated information on an existing Ramsar site

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

If the site boundary has changed:

- i) the boundary has been delineated more accurately ; or
ii) the boundary has been extended ; or
iii) the boundary has been restricted**

and/or

If the site area has changed:

- i) the area has been measured more accurately ; or
ii) the area has been extended ; or
iii) the area has been reduced**

** **Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

7. Map of site:

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

- i) a hard copy (required for inclusion of site in the Ramsar List): ;
ii) an electronic format (e.g. a JPEG or ArcView image) ;
iii) a GIS file providing geo-referenced site boundary vectors and attribute tables .

b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The boundary follows more or less the flood boundaries of the Busanga swamps. The boundary is all fully within the Kafue National park to the south-east and the Kasonso – Busanga Game Management Area to the north-west.

8. Geographical coordinates (latitude/longitude, in degrees and minutes):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

25° 25' E-13° 45' S, 26°10' E- 14° 25' S

9. General location:

Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town.

The Busanga Swamps are located in the North-western Province of Zambia within the administrative region in Kasempa. The plains are partly in the Kasonso-Busanga Game Management Area No. 2 and also the Northern part of the Kafue National Park. The nearest town is Kasempa. The site is fully enclosed in protected areas that are administered by the Zambia Wildlife Authority. To the south-east the site is in the Kafue National Park which does not allow consumptive use of resources. In here only eco-tourism activities and research activities are allowed. The Kasonso-Busanga Game Management Area where the Northern Western part of the site is located allows sustainable consumptive use of resources. Such regulation of use is done in accordance with the Zambia Wildlife Act.

10. Elevation: (in metres: average and/or maximum & minimum)

914- 1218 m

11. Area: (in hectares)

200 000ha

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

The plains have varied ecosystems, ranging from swamps, large grassy plains and open dambos to dense Miombo woodlands, supporting a wide variety of wildlife. Of a rarer occurrence are the blue duiker (*Cephalophus monticola defriesi*) and yellow-backed duiker (*Cephalophus silvicultor ruficristus*) in the woodland area as well as the more common Miombo woodland species such as the roan antelope (*Hippotragus equinus*), sable antelope (*Hippotragus niger*) and Liechtenstein's hartebeest (*Alcelaphus lichtensteini*). It is also an important wetland for the threatened Wattled Crane (*Grus carunculatus*), Red Lechwe (*Kobus leche*) and Sitatunga (*Tragelaphus spekei*).

13. Ramsar Criteria:

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9

14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Criterion 2

The site hosts a number of endangered species such as the Wattled Crane (*Grus carunculatus*), cheetah (*Acinonyx jubatus*) and lion (*Panthera leo*), which the IUCN Red List classify as vulnerable, and the *Kobus leche* (Red Lechwe), yellow-backed duiker (*Cephalophus silvicultor ruficristus*) and Blue Duiker (*Cephalophus monticola*), which are

listed on CITES Appendix II. The leopard (*Panthera pardus*) is also present at the site (Cites Appendix I), as well as the endangered wild dog (*Lycaon pictus*) (endangered on IUCN Red List)".

Criterion 3

The Busanga Plains support a variety of animal species. The site is internationally important because it supports the following species that are important for the maintenance of the biodiversity of Southern Africa: Blue Duiker (*Cephalophus monticola*), Yellow Backed Duiker (*Cephalophus silvicultor*), Sable (*Hippotragus niger*), Hartebeest (*Alcelaphus lichtensteini*), Wildbeest (*Connochaetes gnou*), Lion (*Panthera leo*) and Zebra (*Equus burchelli*) and many more different species of animals such as the abundant warthogs (*Phacochoerus aethiopicus*).

Criterion 4

The Busanga plains provide refuge to large numbers of waterbirds during the dry season which later disperse to smaller wetlands in and around the Kafue National park during the rainy season (Peter Leonard, 2005). It is therefore an important refuge area during the dry season. Some of the birds found in the area during the dry season include Openbill stork (*Anastomus lamelligerus*), Spur-winged goose (*Plectropterus gambensis*), Wattled Crane, (*Grus carunculatus*), Southern Crowned Crane (*Balearica regulorum*), and Common pratincole (*Glareola pratincola*)

The area also supports the threatened Red Lechwe (*Kobus leche*).

Criterion 6 (will still need further information in future).

The area has a number of species which may be found to occur in numbers exceeding 1% threshold and these include Openbill stork (*Anastomus lamelligerus*), Spur-winged goose (*Plectropterus gambensis*), Wattled Crane, (*Grus carunculatus*), Southern Crowned Crane (*Balearica regulorum*), Common pratincole (*Glareola pratincola*), Caspian Plover, and African Skimmer. However few counts have been done and more data verification will still need to be done on this criterion. (Peter Leonard, 2005 – page 79).

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) **biogeographic region:** Kafue Freshwater Ecoregion

b) **biogeographic regionalisation scheme** (include reference citation): WWF Freshwater Ecoregions of Africa classification

16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

The site lies due north of Kafue National Park. It has varied ecosystems, ranging from swamps, large grassy plains and open dambos, to dense Miombo woodlands.

The area experiences three main types of season: wet, cool dry and hot dry seasons. The wet season is from October to March, with precipitation ranging from 600 to 1400mm, increasing towards the source. Average temperatures in the wet season range from 20 to 22.5 degree Celsius, cold dry is normally 15 degrees Celsius and the hot season ranges from 22.5 to 27.5 degrees Celsius.

The geology of Busanga Plains is a representative of Sandveld soils which are poor soils mainly used for grazing cattle with some local subsistence crops. The area is dominated by grassland vegetation. During the dry season surface water reduces substantially but is not completely dried. This makes the Busanga swamps ecologically important for the Kafue National park as it becomes a refuge of many animal and bird species including the wattled and crowned cranes.

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

The Busanga swamps fall within the Kafue Basin and specifically the middle catchment area. The Kafue river basin forms the largest sub-basin of the Zambezi (156,995 km sq) and entirely lies within the Zambia. The Kafue River's 1,300 km drops from an elevation of 1,395 m at source to 359 m at its confluence with the Zambezi. Within the Kafue basin important tributaries join the main river some of which are Lunga, Kafubu, Luswishi, Lufupa, Kafulafuta. Kaleya, Mwembeshi. The basin in the upper catchment has geology of Katanga period with copper bearing rocks. In the middle Zambezi where the Busanga is located there are rocks of Karoo origin overlain with alluvium, colluvium and laterite in many areas including the Busanga itself (JICA 1995).

18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

The swamps are a groundwater recharge system. The swamps also act as a flood control system for the Kafue River.

19. Wetland Types

a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)
 Inland: L • M • N • O • P • Q • R • Sp • Ss • Tp Ts • U • Va •
 Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

Tp-M-Ts-N

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The habitat of the site has quite diverse plant species that support a wide variety of wildlife.

The site is largely an open grassy swampy area dotted with a lot of lagoons especially in the dry season. However, the emergent areas are dominated by miombo woodland on the uplands while on the fringes of the plains are scattered thorn Acacia species.

Some of the bird species found in the area include Openbill stork (*Anastomus lamelligerus*), Spur-winged goose (*Plectropterus gambensis*), Wattled Crane, (*Grus carunculatus*), Southern Crowned Crane (*Balearica regulorum*), Common pratincole (*Glareola pratincola*),

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

The habitat of the site has quite diverse plant species that support a wide variety of wildlife. Noteworthy species here will be the fig trees (*Ficus sycomorus*) which are huge in size and unique in this sense.

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

The site has the following:

- Blue Duiker (*Cephalophus monticola*) - Rare
- Yellow Backed Duiker (*Cephalophus silvicultor*) - Rare
- Sable (*Hippotragus niger*)
- Hartebeest (*Alcelaphus lichtensteini*)
- Wildebeest (*Connochaetes gnou*)
- Lion (*Panthera leo*)
- Zebra (*Equus burchelli*) - the highest concentration in Zambia.
- The site is unique in that it's still inhabited by the highly threatened species of wild dog (*Lycaon pictus*), Cheetah (*Acinonyx jubatus*) and Leopard (*Panthera pardus*).

23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

The site supports quite a variety of fish and thus is an important fishery of Zambia. The most exploited species are the Cichlids mainly *Tilapia* sp.

There is a seasonal fishing done by local people using traditional gear while there is commercial sport fishing as a tourism activity.

There is a very interesting huge baobab tree within the site known by the locals as **Mukondakamwale** found at the lodge called Treetops. It's believed to have enclosed three girls (maidens) who sought refuge when it was raining.

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box and describe this importance under one or more of the following categories:

- i) sites which provide 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:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where 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:

24. Land tenure/ownership:

a) Within the Ramsar site:

The site to the south east is in the Kafue National park making it state land and the other part is in the Kasonso-Busanga Game Management area where controlled communal use of land under the chiefs is allowed as long as it does not violate the Zambia Wildlife Act.

b) In the surrounding area:

The Kafue National Park is state land while the GMA surrounding the site allows communal use of land as long as it does not violate the wildlife Act. Beyond these areas we have land under the Local Chiefs.

25. Current land (including water) use:

(a) Within the Ramsar site: and (b) in the surroundings/catchment:

a) Fishery

b) Wildlife conservation and tourism activity includes:

Night drives, boat trips, game viewing, walking safaris

In the surrounding areas, there's much of subsistence agriculture going on with Cassava, Sorghum and maize as the main crops being cultivated.

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

(a) Within the Ramsar site: and

1. Over fishing and deforestation (due to charcoal burning and land clearing), agro-chemicals leaching into the water body causing eutrophication.
2. Poaching, agro-chemicals, erosion and settlements.

(b) in the surrounding area:

1. Over fishing and deforestation (due to charcoal burning and land clearing), agro-chemicals leaching into the water body causing eutrophication.
2. Poaching, agro-chemicals, erosion and settlements.

27. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

The plains lie in the Kasonso-Busanga Game Management area and in the Kafue National Park and therefore are a protected area. In the National Park non consumptive tourism and recreational activities are allowed and in the Game Management Area sustainable Consumptive use is allowed.

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ; Ib ; II ; III ; IV ; V ; VI

c) Does an officially approved management plan exist; and is it being implemented?:

There is a Draft Management Plan for the Kafue National Park that covers this site. This Plan is being updated. There will however be the need to have a plan dedicated to this site as it goes beyond the Kafue National park in the Game Management Area (Kasonso – Busanga).

d) Describe any other current management practices:

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

The area has an interim management plan which envisages achieving the following.

1. The need to strengthen the institutional focal point for the management of wetlands.
2. Promotion of public awareness and increasing the participation of local communities in wetland conservation programmes.
3. To promote a multi-sectoral approach to the planning and management of wetland, etc.

29. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

The Ngoma research station is within the vicinity of the Busanga Plains. The station is an area that has been preserved for vegetation research. No fire is allowed in these areas. Comparisons are done in habitat characteristics of this area with the surrounding areas within the park.

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

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

There are two lodges specifically meant for conservation education. These are TREETOPS for young children and KAFWALA for wildlife and environmental conservation society of Zambia - Members only. School children are brought to these areas from as far as over 200 km in Lusaka to come and learn about ecology and tourism and nature.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

The site being within the National Park is used for tourism. During the tourism season camps are set up by tour operators who bring visitors to view game and bird life in a pristine environment. This happens mainly from around April to November. Hunting is also allowed in the park of the wetland that is in the Game Management Area subject to regulation by the Zambia Wildlife Authority.

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc.

Implementation of the Wetlands Policy housed under the Ministry of Tourism, Environment and Natural Resources (MTENR) and is executed by the Zambia Wildlife Authority.

33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

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34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Environmental Council Of Zambia (2000): State Of Environment Report 2000 – Norwegian Agency for Development Cooperation

Jachmann H (2000); Zambia's Wildlife Resources: A brief Ecology

JICA, 1995; The study of the National Water Resources Master Plan in the Republic of Zambia. Interim Report.

Norwegian Agency for International Development Cooperation

NPWS & JICA (1997): Kafue National Park Interim Management Plan

Peter Leonard, 2005, Important Bird Areas in Zambia. Zambia Ornithological Society.

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