

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

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FOR OFFICE USE ONLY.

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Designation date

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Site Reference Number

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## 2. Date this sheet was completed/updated:

Tuesday April 18, 2006

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## 3. Country:

Liberia

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## 4. Name of the Ramsar site:

Gbedin Wetlands

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## 5. Designation of new Ramsar 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

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## 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 area are unchanged:

or

If the site boundary has changed:

- i) the boundary has been delineated 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 a designated site is being restricted/ reduced, the contracting party should have following the procedures established by the Conference of the Parties in the Annex of the 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 to the Ramsar site including in the application of the criteria, since the previous RIS for the site:

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### 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 a site, with clearly delineated bordering, is included as:

- i) a hard copy (require for conclusion of site in the Ramsar list):
- ii) an electronic format (e.g. a JPEG or Arc View image)
- iii) a GIS file providing geo-referenced site bordering vectors and attribute tables

b). Describe briefly the type of bordering 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 a shoreline of a waterbody, etc.

The delineation was an on screen digitizing using 250k topography base map taking into consideration geographical and catchments boundaries.

The map highlights the large swamp used for the cultivation of rice and creek that flows through the area as the main wetland features.

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### 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.

The site is at latitudes 07° 16' N and longitudes 08° 48' W

### 9. General location:

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

The Gbedin Wetland is in the North of Liberia near the town of Ganta. The largest administrative region is Nimba County. Ganta has about ten thousand inhabitants. The wetland site is about three miles away from Ganta City.

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### 10. Elevation: (average and/or max. & min.)

1000-1,385m above sea level

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### 11. Area: (in hectares)

The area size is 25 ha. of swamp under rice cultivation and proposed as Ramsar site.

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## 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 Proposed Gbedin Wetlands is largely a swamp at the lower part of the Nimba Mountain. It is inhabited by the Gio and Mano tribes of Liberia with a small population of Mandingo tribe crossed over from Guinea. The most practiced religions are Christianity and Islam with Christianity being the dominant.

The Gaye Creek running across the site is a tributary of one of the major rivers in Liberia, the St. John. The soil type is lateritic and rocks common in this area are those of the Precambrian.

The suitability of the swamp for rice cultivation has prompted the Government of Liberia in 1960, to solicit technical assistance from the Chinese Government to lay out the area for modern agricultural methods to be introduced to local rice farmers. The project became known as the Gbedin Swamp Rice Project. The aim of the project was to provide local farmers new alternative for growing rice for increase yield. This was to discourage shifting cultivation which has greatly devastated the forests of Liberia nation wide. This site therefore became a demonstration site for farmers in the North. In order to encourage the participation of local farmers, government provided incentives in terms of free medical care, housing and schools for farmers and their families.

The area sits within the northern highlands with an elevation range up to 1,385m above sea level. It has been the major supplier of seed rice to many local and crossed border farms such as Guinea.

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## 13. Ramsar Criteria:

Circle or underline 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).

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8

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

Many of the species present at the site are currently considered as endangered species and are vulnerable. They include Three-cusped Pangolin *Manis tricuspis* (CITES App. II) and the endemic otter shrew *Micropotamogale lamottei* (EN). Some migratory birds species include the Little Ringed Plover *Charadrius dubius* (CMS App. II), and Forbes' Plover *C. forbesi* (CMS App. II)

### Criterion 4

Gbedin is a man-made wetland type with irrigation system that includes channels, ditches, dams and drainages. It provides a good feeding ground for many birds, wildlife

and fish species. The paddy fields provide good feeding ground for many bird species including Palaearctic and Nearctic migrants as well as resident breeders such as the Plover *Charadrius dubius*, Bar-Godwit *Limosa lapponica* and the Forbes' Plover *C. forbesi* for example

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**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:**

Southern Upper Guinea Freshwater Ecoregion

**b) biogeographic regionalisation scheme** (include reference citation):

WWF's Freshwater Ecoregion of Africa

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**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 Gaye Creek, at the lower end down south of the river flow is a shallow water body with up to 1.5m and has a greater depth northwards up to 3m. The creek never dries up and has water throughout the year with fluctuation at every season. It is during the rains that the tide raises to 3m downstream and 1.5m upstream. A dam for the purpose of irrigation was constructed by the Chinese Government for irrigating the paddy fields.

The climatic situation up this area is humid, with low humidity during the dry season from December to February-March. Relative humidity varies from 99-94%. The annual rainfall is between 3,825mm-1,818mm. The main maxima and minima temperature is 30°C-24°C around Ganta.

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**17. Physical features of the catchment area:**

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

The landscape is a gently undulating hilly plain. Secondary forest dominates. It has a lateritic type of soil. Common types of rocks observed are the Precambrian and gneiss. These are found within the bottom of the creek. Relative humidity is up to 99% with a temperature range of 30°C-24°C.

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**18. Hydrological values:**

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

The hydrological value is that the water functions as an underground water recharge for rural water supply.

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**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.

3, 9, 6, W

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**20. General ecological features:**

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site.

The Gbedin Wetland is found in the lowland region of Nimba Mountain range. It consists of secondary forest such as *Raphia vinifera*, *Mitragyna ciliata*, etc.

The main wetland habitat consists of the Gaye Creek and the large swamp at the lowland area of the Nimba Mountain Range. The Gaye Creek is the source of water supply to the Gbedin Agriculture Rice Project. The paddy fields provide good feeding ground for many bird species including Palaearctic and Nearctic migrants as well as resident breeders. Some of these bird species identified by research carried out by Wulf Gatter in Nimba include the Green Sandpiper *Tringa ochropus* and Tiger Bitterns *Tigriornis leucolophus*, all Palaearctic migrants. Other species of birds include Black-winged Stilt *Himantopus himantopus*, African Dwarf Bittern *Ixobrychus sturmii*, etc.

Other forms of wildlife include the Three-cusped Pangolin *Manis tricuspis*, Bushbuck *Tragelaphus scriptus* and thirty-nine species of bats. In the creek common freshwater fishes include the Snake Fish *Conger conger*, Frog Fish *Batrachoides liberiensis*, Mullet (flat) *Mugil falcipinnis*, etc.

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**21. Noteworthy flora:**

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. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Noteworthy floras in this area are the huge *Piptadeniastrum africanum*. This is the tallest tree in the forest. The other is the *Ceiba pentandra* which is the widest.

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**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.*

Noteworthy fauna is the endemic species, Otter Shrew *Micropotamogale lamottei*.

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### **23. Social and 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.

**a).** Generally the site has been a major source of employment for the local people in Gbedin. The Gbedin Rice Project employed a large number of local people around a figure of up to one thousand when the Governments of Liberia and China jointly operated the project until the onset of the Liberian Civil war in 1990. The project provided the opportunity for villagers to attend school and receive medical care free of charge.

As the result of the project the river water ways were regularly maintained and villagers could make large catches of fish. Hunting was so regulated and the threats of endangering wildlife were reduced. The modern irrigation system kept the paddy fields flooded thereby making it suitable for bird feeding.

During the harvesting of the rice it was a festive occasion for villagers. It was at this time the traditional devils came out with its players to perform. Producers of palm wine (a local beverage made from the *Raphia* palm) and local fishermen all benefited from their sales during this time.

Today the site is only being managed by local people themselves and conditions are not as good as they were in the past. But this can be restored when the site comes under a protected area management network.

The Gbedin Rice Project generated the traditional and cultural spirits of the Gio and Mano ethnic tribes in Gbedin which predominate the area. The project was a pace setter for traditional practices and reconciliation

### **b)**

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

**No.**

- 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:

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**24. Land tenure/ownership:**

- (a) within the Ramsar site:

The Government of Liberia through the Ministry of Agriculture, Department of Extension and Research owns the site area.

- (b) in the surrounding area:

The Gio and Mano tribal clan own the area around the site.

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**25. Current land (including water) use:**

- (a) within the Ramsar site:

The area is used for subsistence farming, hunting and fishing. The duikers, particularly the Maxwell Duikers *Cephalophus maxwelli*, are the most commonly hunted animal for sale. All the various species of fish, such as Snake Fish *Conger conger*, Stinger *Dasyatis spp./Rajiforma*, etc. are sold for livelihood means. At other times, these meat and fish are exchanged for other goods with people, especially travelling from Monrovia.

Within the site, rice is the only crop that is cultivated. This means farmers must attain other crops from surrounding communities as in the case of a barter system. It is a rule that nothing else is grown within the site because the site was exclusively established for rice cultivation. When the irrigation system was fully working, farmers grew rice throughout the season and there was no time to engage in other crops.

- (b) in the surroundings/catchment:

The area is used generally for logging and mining. There are also subsistence farming and hunting activities. Farmers are planting multiple crops such as rice, bitterballs, pepper, tomatoes, etc. They sell mainly to the project workers.

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**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:

The use of fertilizer and pesticides are potential threats to the ecological character of the area.

- (b) in the surrounding area:

Past factors affecting the ecological character of the area include the operation of the Liberian American Mining Company which washed the iron ore and wasted the water into the St. John River. This affected the River quality and colour. Another threat was that of heavy logging activities carried out by large logging companies in Nimba.

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**27. Conservation measures taken:**

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

The National Conservation measure, like all other proposed Ramsar sites is to place Gbedin Wetland under a protected area management network when it has successfully met the criteria set by Ramsar.

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

NA

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.

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

NA

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

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

No management plan has been developed. In order to restore and maintain the paddy fields as it was originally for the continued feeding of bird species annually visiting the fields, it is important that a protected status be obtained and a management plan be developed.

d) Describe any other current management practices:

Currently the Ministry of Agriculture is the management Authority and has no management plan. Therefore the farmers are managing the area by themselves.

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**28. Conservation measures proposed but not yet implemented:**

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

No conservation measure has been proposed beside what the work of this RIS is intending to do. The Gbedin Wetlands after fulfilling the required criteria for Ramsar Site, will have a management plan developed in order to seek governments approval under the Act creating the Environmental Protection Agency (EPA) of Liberia.

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**29. Current scientific research and facilities:**

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



No current research is ongoing aside from a survey that was conducted by BirdLife International to determine bird population. This research was sponsored by Wetland International under the administrative guidance of the Society for the Conservation of Nature (SCNL) in Liberia. The head research scientist was Wolf Gatter of Germany who led a team of research personnel from the Forestry Development Authority (FDA), the University of Liberia (UL) and the Environmental Protection Agency (EPA) of Liberia in 2005.

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**30. Current conservation education:**

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

There is no current conservation education ongoing beside the site visits that were made by EPA personnel to collect relevant data about the site. During these visits wetland communities were able to know the mission of the visits at which time an exchange of information was made. Other education and communication strategy include radio talk shows periodically occurring on various radio programs. In November 2005 students in elementary division were asked to depict the wise use concept through arts by the Government CEPA Focal Point.

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**31. Current recreation and tourism:**

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

There is nothing for recreation and tourism attraction in this area

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**32. Jurisdiction:**

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

The Ministry of Agriculture is the Government's institution with jurisdiction over this area.

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**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.

The Ministry of Agriculture is the Government's institution that has management authority  
Department of Extension Service

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**34. Bibliographical references:**

scientific/technical references only. If biogeographic regionalisation scheme applied (see 13 above), list full reference citation for the scheme.

- 1). The Liberian Bushmeat Atlas produced by the Philadelphia Zoo
  - 2). Liberia National Biodiversity Strategy and Action Plan (NBSAP)
  - 3). Report from the Project “The Impacts of Nutrient Discharge in The Liberian Coastal Waters”
  - 4). The Birds of Mount Nimba, Liberia (Peter R. Colston and Kai Curry-Lindahl 1986)
  - 5). Birds of Liberia (Wulf Gatter 1997)
  - 6). Birds of Liberia-A Preliminary Check-List with Status and Open questions
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**APPENDICE**

**List of Some Birds found in highland areas in Liberia  
(Gbedin and Kpatawee Wetlands inclusive)**

<b>No.</b>	<b>Common Name</b>	<b>Scientific name</b>
1	Hooded Vulture	<i>Neophron monachus</i>
2	Beaudouin's Snake Eagle	<i>Circaetus beaudouini</i>
3	Brown Snake Eagle	<i>Circaetus cinereus</i>
4	Bateleur	<i>Therathopius ecaudatus</i>
5	Common/Steppe Buzzard	<i>Buteo buteo</i>
6	Tawny Eagle	<i>Aquila rapar</i>
7	Whalberg's Eagle	<i>Aquila whalbergi</i>
8	Swallow-tailed Kite	<i>Elanus riocourii</i>
9	Grey Kestrel	<i>Falco ardosiaceus</i>
10	Lesser Kestrel	<i>Falco naumanni</i>
11	European Hobby	<i>Falco subbuteo</i>
12	Common Quail	<i>Coturnix coturnix</i>
13	Helmeted Guineafowl	<i>Numida meleagris</i>
14	Verreaux's Eagle Owl	<i>Bubo lacteus</i>
15	Black-winged Stilt	<i>Himantopus himantopus</i>
16	Violet Turaco	<i>Musophaga violacea</i>
17	African Scops Owl	<i>Otus senegalensis</i>
18	Spotted Crane	<i>Porzana porzana</i>

19 Little Crake	<i>Porzana parva</i>
20 Black-billed Wood Dove	<i>Turrur abyssinnicus</i>
21 Brown Nightjar	<i>Caprimulgus binotatus</i>
22 Red-necked Nightjar	<i>Caprimulgus ruficollis</i>
23 Freckled Nightjar	<i>Caprimulgus tristigma</i>
24 Striped Kingfisher	<i>Halcyon chelicuti</i>
25 European Bee-eater	<i>Merops apiaster</i>
26 Little Stint	<i>Calidris minuta</i>
27 Swallow-tailed Bee-eater	<i>Merops hirundineus</i>