

Information Sheet on Ramsar Wetlands

1. Date this sheet was completed/updated: 29 October 2001

2. Country: Guinea

3. Name of wetland: Niger (source)

4. Geographical coordinates:

09° 00' and 09° 40' North latitude
10° 20' and 11° 00' West longitude

5. Altitude: 375 metres

6. Area: 180,400 hectares

7. Overview:

This site is located entirely within the prefecture of Faranah and extends from Beleya (Bandeya) to 9° 40' North, up to the southern source of the Niger River. It is limited on the north by the prefecture of Kouroussa, to the south by Sierra Leone, to the east by the prefecture of Kissidougou and to the west is the prefecture of Faranah. Its vegetation is that of the savannah with marked influence of forest vegetation. Here, there is no more shea tree (*arbre à karité*) (*Vitellaria paradoxa*). The climate is dry with temperatures between 20° and 30°, and rainfall of 2000 millimetres. There are two seasons: a dry season and a rainy season. The dry season is from November to May and is marked by a hot, dry wind, the harmattan, which blows from east to west. The winter season is from June to October. It is characterized by heavy rain. The relief in the prefecture of Faranah, in which this Ramsar site is located, is relatively flat with elevations of 400 to 900 metres. The hydrographical network is rather dense with many backwaters, all converging towards a central collector: the Niger River. It is the main point of recharge for the entire downstream basin. The site benefits from underground water over more than seven kilometres between the villages of Linkéna and Salignabafè, according to information received from the sub-prefecture of Banian from the sub-prefect and the head of the local forest service.

Underground circulation: Water is completely invisible in the bed, but it is like a buried canal. Because of current security considerations along the border, no field observations were made.

There is a floodplain with a great interest for agriculture and fishing.

8. Wetland type: M, N, Tp and 4

Inland wetland:

M: Permanent rivers/streams/creeks; includes waterfalls;

N: Seasonal/intermittent/irregular rivers/streams/creeks;

Tp: Permanent freshwater marshes/pools; ponds (fewer than eight hectares), marshes and swamps on inorganic soils; with emergent vegetation water-logged for at least most of the growing season;

Human-made wetlands:

4: Seasonally flooded agricultural land (including intensively managed or grazed wet meadow or pasture);

9. Ramsar criteria: 1, 2 and 3

The criterion that best characterizes the site is criterion 1, because this is the source of the Niger River and underground water circulation.

10. Map of site included? Please tick yes -or- no

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

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12. Justification of the criteria selected under point 9, on previous page:

Criterion 1: The wetland is the source of the Niger River, the second most important African river for its biological diversity in fish resources. All downstream processes depend on it.

Criterion 2: The site is the habitat for an endemic fish species, *Arius gigas*, threatened with extinction from overfishing (see item 18). According to the literature, this species exists only in the Niger River basin. It was last fished in the Mafou River, one of the important tributaries of the Niger by a team of scientists from the onchocerciasis project and the Université de Kankan under an agreement for studying fish in the Parc du Haut Niger. It is reported to be found in other tributaries of the Niger.

Criterion 3: This site has a type of peri-forest vegetation. It contains both forest species, such as *Chlorophora excelsa*, and a high density of *Eleis guineensis* (oil palm) and savannah species. Its floristic composition is varied (see list of species of fish in the annex and item 16). Its aquatic fauna is also rich (see item 18). In addition, the site is visited annually by waterfowl of the following species: spur-

winged goose (*Plectropterus gambensis*), white-faced tree-duck (*Dendrocygna viduata*), cattle egret (*Bubulcus ibis*), little egret (*Egretta garzetta*) and jacana (*Actophilornis africana*).

13. General location:

This wetland is located in the prefecture of Faranah, the main administrative centre of the regional government (gouvernorat). The town of Faranah is located at the site. It is 451 kilometres from Conakry and 327 kilometres from Kankan, the administrative centre for the natural region.

14. Physical features:

Soils: The site is located on poorly evolved entisols and fersiallitic and alluvial soils, which give it a high and varied agricultural potential.

Hydrology: The site has a dense hydrographical network with many ponds all draining to a central point, the Niger, the source of supply for the entire downstream basin. The site itself benefits from underground circulation over more than seven kilometres between Linkèna and Salignabafè in the sub-prefecture of Banian. It is the only site in the basin that has an underground bed meriting further study and with a potential for tourism. Water quality is relatively good. No negative chemical changes in the water have been recorded. The depth of water varies. It is deepest in the rainy season especially from July to September. The watershed is very important for the whole wetland and is worthy of protection and monitoring because it is the heart of the Niger River. The site serves to recharge the area downstream. Rainfall reaches 2000 millimetres, and average temperatures range between 28° and 32° C. The dry season often causes a severe drop in the river at the wetland.

15. Hydrological values:

This wetland plays a role in the permanent recharging and conditions the whole process downstream. The banks are protected, and there is no silting-in. The only capture of sediments is the accumulation of alluvial material on the floodplains, which renews their fertility. The hydrological balance is positive; with underground water circulation worthy of monitoring and study for the reasons given earlier.

16. Ecological features:

The main types of habitat are beds of rivers and streams, floodplains, permanent or seasonal pools formed by depressions in minor streambeds, backwaters that are *biefs* linking streambeds to floodplains, grottos, termite mounds (abandoned or active) and holes, ditches and underground passageways.

Types of vegetation: gallery forests, grasslands and grassy and wooded savannah.

Local ligneous species: *Azelia africana*, *Chlorophora excelsa*, *Danielia oliveri*, *Eleis guineensis*, *Mitragina stipulosa*, *Parkia biglobosa* and *Ptérocarpus erinaceus*.

Introduced ligneous species: *Acacia* spp., *Gmelina arborea*, *Gossypium* sp. and *Tectona grandis*.

Herbaceous species: *Andropogon vetiveria*, *Ceratophyllum*, *Echinochloa* spp., *Hydrocharis*, Nymphaeaceae (*N. lotus* and *Nuphar* sp.), *Oryza*, *Panicum* and *Pennisétum*.

Invasive species: *Typha* has been recorded at several places. Transitory vegetation is slightly different from the surrounding regions.

17. Noteworthy flora:

Lingué (Afzelia africana) because of its value is endangered. Its wood is sought after for furniture making. This is also the case for *Chlorophora excelsa*.

18. Outstanding fauna

The fauna is rich and varied, including mammals, reptiles, insects, amphibians, birds and fish. An endemic species is the fish *Arius gigas*. This fish belongs to the Aridae family, in which are included large Siluriformes in general. It is endemic to the Niger basin. This endemism goes far back because remains of that species, *Chrysichys furcatus* (*C. maurus*) and *Lates niloticus* dating from the lower Holocene have been identified in the present Central Niger Delta by Daget in 1961. Contrary to many other species in the genus, *Arius* lives in the sea or brackish water. *A. gigas* is strictly a freshwater fish. Earlier, *A. gigas* was relatively abundant in the Niger. Because of the rapid growth of river fishing and the economic importance of the species, the stocks have very quickly dropped to the point that *A. gigas* was threatened with extinction. Its large adult size (about 1400 millimetres long and weighing up to 40 kilos) makes it an especially vulnerable species.

19. Social and cultural values:

Agricultural production (see agricultural production in the prefectures in the basin, survey 1995).

Fishing: Statistics on fishing production at the site do not exist, but an estimate can be made of production in the basin. Upper Guinea is on the Upper Niger where water productivity is less than in the Central Delta. Considering, however, that the overall aquatic ecosystem is currently of sufficient quality, the theoretical productivity of the floodplains can be estimated to be 50 kg/hectare/year in this region.

The area of floodplain is estimated, in a good hydrological year, at 100,000 hectares. On this basis, it can be estimated that the potential fisheries production in Upper Guinea is 5,000 tons/year minimum. Taking into account the whole river network (2,500 kilometres of streams, of which only one third has areas subject to flooding), the theoretical potential production in Upper Guinea is probably, in a good hydrological year, between a total of 5,000 and 6,000 tons/year.

Grazing: (see annex on the number of cattle and number of farms raising cattle)

Forestry: Forestry is not yet developed.

20. Land tenure/ownership of:

Land tenure is based on tribal customs. Ownership of land is gained through having occupied it first or inheriting it from parents who were the first inhabitants. The land can be loaned, given or given in guarantee, but is seldom sold.

There are forests belonging to the *groupement forestier* of an area of: (see item 21).

These forests are managed in a framework of participatory management. The forest administration acts as technical adviser, preparing a forest management plan with the participation of the beneficiaries. The *groupement* becomes owner after obtaining a certificate signed by the minister if the area has at least 100 hectares and if fewer then the certificate is signed by the Directeur National des Eaux et Forêts.

The total area of forest belonging to the *groupements forestiers* is 149.1 hectares. The government remains potential owner of all the land. A rural land tenure code does not yet exist. The land tenure system is the same as that in the surrounding areas.

21. Current land use:

Land is occupied mostly for agriculture and livestock raising: (see annex on the total cultivated area and the number of livestock farms)

Lacking a management plan, land use is anarchic, which has harmful consequences (farming on hillsides, deforestation of headwaters or destruction of gallery forests on riverbanks) on the wetland and downstream areas, causing adverse ecological changes, such as catastrophic flooding in August and September 2001.

Protected forest: Source of the Niger, 4,770 hectares

Forests of the *groupements forestiers*:

Groupement forestier Benkadi-----	35.50 hectares
Groupement forestier Sabatibara-----	49.50 hectares
Groupement forestier Diamanadèmè-----	64.00 hectares

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

Adverse factors are usually the consequences of socio-economic activities.

Agriculture, has been extensive since time memorable often with arbitrary use of fire causing destruction of the vegetative cover. The resulting denuded soil is subject to erosion, and wildlife is threatened because of destruction of its habitat. Livestock raising and hunting are carried out with the same logic and also participate in creating ecological imbalances. Fishing, without taking into account the existing potential and its capacity to renew is a factor that risks the extinction of certain species of fish.

Currently, no case of pollution has been reported, but the increasing use of pesticides in the growing of cotton can be dangerous in the future for the site if measures are not taken.

23. Conservation measures taken:

According to the Wildlife Protection Code and Hunting Regulations, the categories of protected areas in Guinea are national parks, integrated nature reserves, managed nature reserves, special reserves or wildlife sanctuaries, areas of interest to hunting and hunting areas.

The Ramsar site is in the category of managed nature reserves, where all socio-economic activities are authorized but priority is given to the objectives of the Convention for sustainable management of natural resources.

Activities are permitted, taking into account existing codes and regulations. For example uncontrolled burning, the killing of animals out of the hunting season, the clearing of headwaters, growing of crops on a slope and fishing with explosives or any other method leading to indiscriminate killing of fish are prohibited (see the Wildlife Protection Code and Hunting Regulations annexed by mail). There is legislation regarding conservation of natural resources in Guinea, including the Wildlife Protection Code and Hunting Regulations.

24. Conservation measures proposed but not yet implemented:

There is no proposed management plan for the area or for the creation of a protected area. However, the Direction Nationale des Eaux et Forêts is preparing a forest action plan for the prefecture for implementation of a national forest policy. This plan is similar to that of the national plan except that the specific conditions in the prefectures are taken into account. This plan sets objectives and provides for a description of the status of forest resources, an estimate of the need for forest products, a programme of activities in order to ensure production and development of forests, an estimate of the required investment and any other useful indication for execution of a forest policy for the prefectures.

25. Current scientific research and facilities:

The onchocerciasis project has carried out research on the impact on fish and the food chain of selective insecticides used to combat disease vectors. The project uses small airplanes to spray insecticides.

26. Current conservation education:

The only sources of conservation awareness are national radio, local radio and awareness workshops organized by the administration and non-governmental organizations.

27. Current recreation and tourism:

Visits to the wetland for recreation and tourism have not been recorded although there is a potential; for example the disappearance and reappearance of the Niger between Linkéna and Salignabafè and the visits to the source of the Niger River.

28. Jurisdiction:

The governor of Faranah, as the authority responsible for all questions related to the legal territory in the name of the government, has a right to monitor Ramsar sites. He can sign official acts regarding any provision considered necessary for wise management of the sites, taking into account the views of the technicians responsible for management of the wetlands in the gouvernorats, informing the Ministry for Agriculture and Livestock.

National jurisdiction: Ministry for Agriculture and Livestock, which supervises all activities for implementation of management of wetlands.

29. Management authority:

Direction Nationale des Eaux et Forêts
BP 624, Conakry, Guinea

Direction Préfectorale du Développement Rurale et de l'Environnement of
Faranah

Section Préfectorale des Eaux et Forêts de Faranah; les Cantonnements Forestiers of the Commune of Faranah, the Sous-Préfectures of Tiro, Banian and Kobikoro.

30. References:

The Wildlife Protection Code and Hunting Regulations

Chapter II: Conservation of wildlife and its habitats

Article 3: Wildlife constitutes a universal heritage. Its economic, alimentary and social interest is thus recognized, as well as its scientific, aesthetic, recreational and educational value. It is everyone's duty to contribute to its maintenance and development. Preservation of wildlife is ensured by all appropriate means, including the protection of environments and plant species that are necessary for it. Education of the whole population is also ensured, both through education in schools and by audiovisual means, to promote a national awareness of the need for that preservation.

Article 4: Wildlife is a renewable resource that must be protected by placing it in favourable environmental and management conditions. Each animal species is an integral part of the national heritage. For this reason, it should be protected. However, animal populations of a given species can be subjected to wise exploitation, especially from hunting, whenever their level and productivity permit.

Article 5: The preservation, maintenance or reestablishment of sufficient diversity of environments and habitats indispensable for wildlife is also a national obligation. The environment in which wildlife lives is normally used for agricultural, grazing, forestry, and aquatic or marine activities. Special protection measures of the biotopes can be applied to part of the national territory, whenever the status of any species of animal justifies it.

Chapter III: Wildlife management

Article 6: Management and wise use of wildlife consist of maintaining animal populations that compose each species at a satisfactory level. The animals are thus submitted to sustainable use for benefit of the local inhabitants and national well-being. To fulfil this objective, the whole country must participate. It should also participate in efforts made by other countries concerning preservation of migratory species and conservation of endangered species.

Article 7: The means, installations or methods of capture for large-scale or non-selective killing are prohibited because of the danger they represent for the animal populations concerned.

Chapter V: Protection of environments: parks, reserves and hunting areas

Article 10: In order to ensure wildlife conservation and management, national parks, integrated nature reserves, managed nature reserves, special wildlife reserves or sanctuaries, potential hunting areas and hunting areas can be created in Guinea.

Article 41: In the appropriate border areas of Guinea, cross-border parks can be created, organized, improved and administered in agreement with governments of interested neighbouring countries. Cross-border parks are intended, based on a conventional basis and through institutional mechanisms of cross-border cooperation, to ensure preservation and exploitation of natural spaces located on both sides of national borders. These contiguous natural spaces should include biotopes or homogenous or complementary ecosystems and have, from the point of view of biology, ecology, culture, aesthetics, science or socio-economic considerations, outstanding characteristics or an exceptional interest that should be protected, both for the benefit of each interested countries and the benefit for the sub-region concerned.

Forestry Code

Article 71: The forest domain should be protected against any form of degradation or destruction caused by overexploitation, overgrazing, fires, abusive clearing of land, diseases, introduction of inappropriate species and destruction.

Article 72: Whenever necessary, the forestry administration can adopt protection measures to take in forest lands where required in order to prevent erosion on slopes, protect land and installations against water or wind erosion, protect headwaters, combat desertification, protect a rare species or fragile biotope or preserve the natural environment in general.

Water Code

(Law 2/94/005/CTRN of 14 February 1994)

Chapter XIV: International water

Article 55: In its relations with countries with which Guinea shares water resources, Guinea applies principles and regulations generally accepted by the international community for shared water, especially, the provisions of existing conventions to which it has adhered.

Environment Code

The environmental code stipulates the following concerning the land and underground.

Article 15: The soil, underground and the resources that it contains are protected, as limited renewable resources or not, against any form of degradation and managed wisely.

Inland waters

Article 27: Dumping, throwing out and direct or indirect deposits of any kind susceptible of causing or increasing pollution of Guinean inland waters are prohibited under the terms of Article 31.

Fauna and flora

Article 48: The fauna and flora must be protected and renewed through wise management in order to preserve species and their genetic heritage and to ensure the ecological balance.

Article 49: It is prohibited or submitted to prior authorization of the administration, in accord with legislative dispositions and regulations, any activity capable of harming animal and plant species or their natural environments.

Under the AGIR programme (support for the integrated management of natural resources) creation of a Guinea-Mali cross-border protected area is being carried out. Participation of the local communities in the management of wetlands through promotion of awareness is also a conservation measure.