

# Information Sheet on Ramsar Wetlands

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.

NOTE: It is important that you read the accompanying *Explanatory Note and Guidelines* document before completing this form.

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

20.November 1992

FOR OFFICE USE ONLY.

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Designation date

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Site Reference Number

## 2. Country:

France : Guyane

## 3. Name of wetland: Les Marais de Kaw

## 4. Geographical coordinates: 4°25' N, 51°57' W, - 4°51', 52°18' W

Northernmost point: 4°53' N (5 km north of Grand Connétable island)

Easternmost point: 51°54' W (5 km east of Grand Connétable)

Southernmost point: 4°24' N ( Kaw River and Patawati Creek)

Westernmost point: 52°19' W (mouth of Gabrielle Creek)

## 5. Altitude: (average and/or max. & min.)

Between 0 and 6 m, rising in places to 20/50 m on the slopes around the zone and the hills of the upper reaches of the Kaw River, culminating at 219 m on Sable Mountain to the south of Kaw village.

## 6. Area: (in hectares) 137,000 ha, of which:

land area- 105,800 ha;

sea area-31,500 ha.

## 7. Overview: (general summary, in two or three sentences, of the wetland's principal characteristics)

The Kaw plain is a vast grassland swamp, set back from wide mudflats colonised by mangroves and swamp forests. It is criss-crossed by small rivers and dotted with open-water ponds. The diverse wetland habitats and their continuity with the Amazon basin provide for a great wealth of flora and fauna, which, combined with its area, makes Kaw a unique site in Guyane.

15 km north-east off the coast of Kaw is the island of Grand-Connétable, 2.5 km<sup>2</sup> in area. It is a small rocky outcrop where numerous seabirds nest. Since it is the only such site between the Orinoco and the Amazon the island is of considerable international environmental importance.

## 8. Wetland Type (please circle the applicable codes for wetland types as listed in Annex I of the *Explanatory Note and Guidelines* document.)

**I, S, T, X**

marine-coastal: A . B . C . D . E . F . G . H . I . J . K

inland: L . M . N . O . P . Q . R . Sp . Ss . Tp . Ts  
. U . Va . Vt . W . Xf . Xp . Y . Zg . Zk

man-made: 1 . 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9

Please now rank these wetland types by listing them from the most to the least dominant:

## 9. Ramsar Criteria: (please circle the applicable criteria; see point 12, next page.)

1a . **1b** . 1c . 1d | **2a** . **2b** . **2c** . **2d** | 3a . **3b** . 3c | 4a . 4b

Please specify the most significant criterion applicable to the site:

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

(Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map traits).

A map 1: 1,250,000 is annexed to this RIS (IGN No. 517 1<sup>st</sup> edition). The following are noteworthy points in the marine area:

- point A: 2 km north of Jaguar bank (at low spring tide), then eastward to a point 2 km offshore, the first intertidal mudflats (exposed at low spring tide)
- point B: 4°48'N, 52°05' W
- point C: 5 km north of Grand-Connétable, 4° 53' N
- point D: 5 km north-east of Grand-Connétable
- point E: 5 km east of Grand-Connétable, 4°50' N and 51°54' W
- point F: in the Approuague estuary, 4°39'N and 51°58'W

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

cf. section 4 in French original

***Please provide additional information on each of the following categories by attaching extra pages (please limit extra pages to no more than 10):***

**12. Justification of the criteria selected under point 9, on previous page.** (Please refer to Annex II in the *Explanatory Note and Guidelines* document).

**13. General location:** (include the nearest large town and its administrative region)

The Kaw swamp plains south-east of Cayenne are bounded to the west by the Mahury River and to the east by the Approuague estuary. To the north the site includes the islands of Petit- and Grand-Connétable and the maritime area between the islands and the shore at Kaw. (cf. annexed maps document 1)

**14. Physical features:** (e.g. geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate)

Alluvial swampland mostly formed from Quaternary marine deposits (Holocene plain): more or less consolidated clays with salt depth varying between 40cm-1m, all covered with a layer of organic deposits ("pegasse" = acid peat) up to 3 m thick. (cf. annex document 2)

The shoreline is particularly unstable, and is continuously being remodelled by cycles of erosion and growth caused by deposits of alluvial clay washed down the Amazon and strong sea currents.

Two main watercourses cross the swamp: the Kaw River and Angélique Creek. They are almost completely tidal. The freshwater swamps are subject to strong seasonal fluctuations in water levels as rainfall figures vary. The swamps are generally 1-2 m deep, with a maximum of 5 m. Salinity increases with depth. The water recedes from much of the plains area during the dry season (September-November).

Mean annual rainfall is between 3,500-4,000 mm, the highest rainfall figures for the whole of Guyane (as much as 8,000 mm on the lower slopes of Mount Kaw). Maximum rainfall is recorded in December-January and especially in May, with minima in August-November.

The southern part of the site comprises a major part of the Kaw River upstream catchment area: the river and its affluents wind their way between the many hills covered with dryland tropical forest.

**15. Hydrological values:** (groundwater recharge, flood control, sediment trapping, shoreline stabilisation etc)

Alternation between shoreline growth and erosion: mud deposits and mangroves are important feeding grounds for waterfowl and breeding grounds for water animals.

The freshwater swamps, the brackish estuarine waters and the upstream forest creeks are all very rich in fish.

**16. Ecological features:** (main habitats and vegetation types)

A map of the various vegetation formations and their description is annexed (cf. document 2).

There are several distinct vegetation formations and groups. They are directly related to soil type and drainage conditions, with the uniform climate and flat plain conditions playing no part in the distribution of vegetation.

The main ecosystems are coastal mangroves with *Avicennia germinans*, old mangroves with *A. germinans* and *Rhizophora mangle*, swamp forests with pinot palm *Euterpe oleracea*, floating *Cyperaceae* meadows *Eleocharis sp.*, low grassland swamps with *Echinochloa polystachya* and moucou-moucou *Montrichardia arborescens*, sometimes including shrubs with *Chrysobalanus icaco*.

Mudflats are an important feeding ground for waders during stopovers and wintering (including semi-palmated sandpiper *Calidris pusilla*, the most abundant species) and for large numbers of native Ardeidae. There are also many waterfowl and perching species which breed in the mangroves, and the ecosystem also maintains important trophic networks with the estuarine waters.

The pinot palms are home to several species of large fruit-eating birds which are generally rare in Guyane (cock-of-the-rock, toucan, parrot). The grassy swamps provide a remarkable haven for water species, particularly hoatzin *Opisthocomus hoazin* and black caiman *Melanosuchus niger*.

Upstream in the rivers and creeks, the watercourses spring from under the forest mantle and the lower slopes of Mount Kaw. Humidity and the history of regional forest stands in these biotopes have led to the present-day high levels of endemism in, inter alia, vegetation, insects and batracians.

Grand-Connétable hosts a remarkable colony of 6 nesting bird species several thousand pairs strong (frigate birds, terns, noddies and gulls). Numbers of Cayenne tern, royal tern and laughing gull are without equal in other Caribbean islands

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**17. Noteworthy flora:** (indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc)

An inventory of flora and a list of noteworthy species are annexed (cf. Document 5).

The grassland swamp, particularly the cyperacea savanna, have several noteworthy species (e.g. *Eleocharis grandiglumis*, *E. minima*, *E. plicarhachis*, and *Rhynchospora cajennensis*).

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**18. Noteworthy fauna:** (indicating, e.g., which species are unique, rare, endangered, abundant or biogeographically important; include count data, etc.)

An inventory of fauna is annexed (cf. Document 4).

The swampy plains, which adjoin the Amazon basin, form the northernmost boundary of the habitats of a number of species, particularly reptiles. The swamps harbour one of the last remaining stable populations of black caiman *Melanosuchus niger*, an endangered species with numbers estimated at 2,500.

The diversity of the wetlands is the reason for the wealth of birds, particularly waterfowl. There are several hundred thousand migrating (post-mating) and wintering North American waders, including semi-palmated sandpiper *Calidris pusilla*, several nesting Ardeidae species, such as cocoi heron *Ardea cocoi*, great egret *Egretta alba*, snowy egret *Egretta thula*, cattle egret *Bulbucus ibis*, little blue heron *E. caerulea*, Louisiana heron *E. tricolor*, agami heron *Agamia agami*, striated heron *Butorides striatus*, yellow-crowned night heron *Nycticorax violacea*, black-crowned night heron *Nycticorax nycticorax*, as well as scarlet ibis *Eudocimus ruber*, roseate spoonbill *Ajaja ajaja*, wood stork *Mycteria americana*, and occasionally even rarer species, such as neotropic cormorant *Phalacrocorax olivaceus*, jabiru *Jabiru mycteria*, greater flamingo *Phoenicopterus ruber*, maguari heron *Ciconia maguari*. There are also many birds of prey (over 20 species), including slate-coloured hawk *Leucopternis schistacea* which is confined strictly to the floodplain forests of north-east Guyane. Short-tailed parrot *Graydidascatus brachyurus* is another Amazonian species which is mainly confined to this part of Guyane. Finally, the swamps are home to a relictual species which has become extremely scarce in Guyane, hoatzin *Opisthocomus hoazin*, the sole member of its family and a primitive bird of exceptional scientific interest.

The sea waters around Grand-Connétable shelter and feed several thousand seabird pairs: Cayenne tern *Sterna eurygnatha*, royal tern *Sterna maxima*, brown noddy *Anous stolidus*, sooty tern *Sterna fuscata*, laughing gull *Larus atricilla* and magnificent frigatebird *Fregata maganificens*.

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**19. Social and cultural values:** (e.g. fisheries production, forestry, religious importance, archaeological site etc.)

Social:

- important area for nature tourism
- remarkable potential for education in schools and for the general public
- vital hunting and fishing grounds for villagers, but with no management action undertaken

Cultural:

- exceptional ethno-ecological study site
- architectural heritage
- presence of several cultural associations active in Kaw village

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**20. Land tenure/ownership of:**

The site is almost totally owned by the State (public land), except for a few private holdings along the banks of the Kaw River and in Marianne polder.

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**21. Current land use:**

(a) site: There are no activities in the heart of the savanna because access is impossible, and there is thus hardly any human presence whatsoever in the vast swamps. Activity is concentrated in Kaw village, a small Creole settlement with about 50 inhabitants.

The estuary and the coast are fished on a small scale, and a few specialist crews catch crabs in the estuary mangroves.

Many people attracted by the wildlife and the unusual landscape visit the area. Nevertheless, there is hardly any organised tourism and the village hardly reaps any economic benefit whatsoever.

Fishing is still the main activity of the local people, covering both the major part of their food needs and providing a source of income. Fishing products are sold at the market in Cayenne, where the Attipa fish is particularly sought after. However, commercial fishing is only possible at certain times of the year, and is therefore only a seasonal activity.

Finally, there are small farms which graze zebu on the swamp savanna surrounding the village.

Overall, there is little economic activity, and none of the structures in place can really ensure sustainable development.

(b) surroundings/catchment: logging on the southern slopes of Mount Kaw  
restaurants and hotels along the trail leading to the swamps.

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

With the successive failure of projects to turn the swamps into polders and to exploit pinot palm, there are currently no human activities which directly threaten the existence of the swamps.

There are however a number of factors which constitute a definite threat to the biological diversity of the environment:

- pollution from household waste, used engine oils, and sewage
- lack of management of fish stocks
- non-compliance with regulations governing biotopes and protected species.

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**23. Conservation measures taken:** (national category and legal status of protected areas - including any boundary changes which have been made: management practices; whether an officially approved management plan exists and whether it has been implemented)

Most of the swamp lands fall within the ambit of the Prefectoral Decree on Biotope Conservation (No. 1. 964 1D/4B, 4 September 1989 (cf. Annex, document 3).

Grand-Connétable and the 5 km of surrounding sea area have been classified as a nature reserve since 8 December 1992.

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**24. Conservation measures proposed but not yet implemented:** (e.g. management plan in preparation; officially proposed as a protected area etc.)

In the context of the current Regional Nature Park project, several sectors should be proposed as strict nature reserves, more particularly the ponds where black caiman breed, and the banks of Angelique creek

where several hoatzin pairs still nest.

Furthermore the ONF (National Forests Office) is planning to classify the Kaw region as State-owned forest. This would comprise 3 sites, including one swamp site which would remain unmanaged.

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**25. Current scientific research and facilities:** (e.g. details of current projects; existence of field station etc.)

The Kaw swamps have been the venue for research into soils and vegetation, and wildlife inventories have also been carried out (cf. annexed bibliography, document 6).

An energy and environment study financed by ADEME and the P. N. R. association should soon make it possible to determine a coherent policy for the management of human activity and its environmental impact, and to set up a short-term programme of environmental action in the following areas: energy, water, wastes, and other pollution types.

In the future, scientific research should pursue several avenues; namely completing the fauna and flora inventories and improving knowledge of the biology of certain species, such as attipa and black caiman.

In general, better knowledge of how ecosystems function is needed, particularly through hydrological and hydrobiological studies, with the more specific aim of assessing the fish-stock potential in the swamps, in order to ensure the possibility of sustainable fishing with the use of reasonable fishing techniques

Finally, the region is also an exceptional site for ethno-ecological research.

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**26. Current conservation education:** (e.g. visitors centre, hides, information booklet, facilities for school visits etc.)

Nothing has yet been done to organise education and information for either visitors or inhabitants.

The site should, however, be an exceptional venue for the many visitors to discover natural coastal wetlands, and to heighten the awareness of schoolchildren and the public at large of the fragility of and the need to protect these ecosystems. The creation of a "Swamp Centre" could help to achieve these goals and fit in with the future Regional Nature Park.

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**27. Current recreation and tourism:** (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

Since the bridge over the Mahury River was opened, the swamps have come under considerable pressure from tourism, which will certainly increase in the future. There is a village guest house for visitors wishing to stay in the village overnight. Trips through the swamps are organised by a local restaurant owner and tour operators, but many individual tourists travel alone.

The demand for tourism already exists, and it should be easy to build on and promote the natural heritage value of the region.

It will, however, be necessary to improve access to the village and to create extra reception capacity for tourists. Training for all those involved will be necessary if these activities are to be sustainable.

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**28. Jurisdiction:** (territorial e.g. state/region and functional e.g. Dept of Agriculture/Dept. of Environment etc.)

Competent authority: State

Competent conservation authority: Guyane D.R.A.E

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**29. Management authority:** (name and address of local body directly responsible for managing the wetland)

Prefectoral management committee

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**30. Bibliographical references:** (scientific/technical only)

Cf. annexed document 6.

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Please return to: **Ramsar Convention Bureau, Rue Mauverney 28, CH-1196 GLAND, Switzerland**

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