

# 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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Designation date

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Site Reference Number

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

22 September 2005

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## 3. Country:

Malaysia

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## 4. Name of the Ramsar site:

Kuching Wetlands National Park

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## 5. Map of site included:

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

a) **hard copy** (required for inclusion of site in the Ramsar List): *yes*  -or- *no*

b) **digital (electronic) format** (optional): *yes*  -or- *no*

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## 6. Geographical coordinates (latitude/longitude):

N01° 40' 59" - N01° 41' 18" / E110° 12' 16" - E110° 16' 20"

(UTM Format): 7873411.997 – 7808622.475 / 16340776.783 – 16384583.496

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## 7. General location:

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

The site is located in western Sarawak, 15 km NNW of the state capital Kuching. Three villages (called “kampong” in the local Malay language) lie just outside the boundary of the site: Kampung Sibulaut to the west; Kampung Salak to the east; and Kampung Semariang Batu to the south-east.

The town of Telaga Air lies to the west of the site and is one of the closest access points to the site by road. Kampong Santubong and the Damai beach resort complex are located approximately 5km to the north-east of the site.

**8. Elevation:** (average and/or max. & min.)

Predominantly at sea-level, with small patches of higher ground with a maximum altitude of 5m above sea level.

**9. Area:** (in hectares) **6610** ha.

**10. Overview:**

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

The Kuching Wetlands National Park is the only protected area within the former Sarawak Mangrove Forest Reserve.

It is a saline mangrove system with flora comprising predominantly the genera *Rhizophora*, *Avicennia* and *Sonneratia*. The site harbours such noteworthy species as Estuarine Crocodile *Crocodylus porosus*, Proboscis Monkey *Nasalis larvatus* (endemic to Borneo and listed as ‘Endangered’ in the 2004 IUCN Red List), Lesser Adjutant *Leptoptilos javanicus* (listed as ‘Vulnerable’ in the 2004 IUCN Red List), and Griffith’s Silver Leaf Monkey *Trachypithecus villosus* (listed as “Data Deficient” in the 2004 IUCN Red List). The site has value as a breeding and nursery ground for fish and prawn species - 43 families of fishes and 11 species of prawns have been recorded, many of which are commercially-important.

Its proximity to the city of Kuching, the Damai resort complex, and two other national parks renders it of high potential value for tourism, education and recreation. As a remnant of the formerly-extensive Sarawak Mangrove Forest Reserve, it has high research and conservation value.

The Santubong area is of historical importance: there was a Chinese settlement there probably as early as the 1<sup>st</sup> century AD, and early Malay, Hindu and Buddhist relics from the 9<sup>th</sup> century AD have been excavated at Santubong Village. The discovery gold made the Santubong area an important trading and iron mining centre from the 7<sup>th</sup> to 13<sup>th</sup> centuries AD; some enigmatic rock carvings of human figures remain from this period. In the 15<sup>th</sup> century, Santubong was the site of the original Brunei Malay capital of Sarawak. The first White Rajah, James Brooke, built a holiday bungalow at Santubong; the great naturalist Alfred Russel Wallace wrote some of his important works on evolution while staying at this bungalow in the mid 1850s.

**11. 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

**12. Justification for the application of each Criterion listed in 11. 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 1:** The site is a particularly good representative example of a natural coastal mangrove system, characteristic of the **Borneo** (Udvardy, 1975) biogeographical region.

**Criterion 2:** The site supports the Proboscis Monkey *Nasalis larvatus* - listed in Appendix I of the Convention on International Trade in Endangered Species (CITES) and ‘Endangered’ in the 2004 IUCN Red List, Lesser Adjutant *Leptoptilos javanicus* - listed in the 2004 IUCN Red List as

‘Vulnerable’, and Griffith’s Silver Leaf Monkey/Langur *Trachypitecus villosus* (listed as “Data Deficient” in the 2004 IUCN Red List).

**Criterion 4:** The site is of special value as a nursery area for the Estuarine Crocodile (*Crocodylus porosus*).

**Criterion 8:** The site is an important spawning and nursery ground for fish and prawn species.

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**13. 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:**

**Borneo;** Udvardy (1975): 4.25.13

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

M.D.F. Udvardy, 1975. A classification of the biogeographical provinces of the world. (Occasional Paper no. 18). Gland, Switzerland: International Union for the Conservation of Nature and Natural Resources.

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**14. 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 is located within a flat deltaic mangrove area. It is within Watson’s (1928) Inundation Class 5 (i.e. inundated by abnormal or equinoctial tides; and flooded up to twice a month). Drainage condition is extremely poor, except on terraces in the interior parts of the site which are generally higher. These sandy terraces are porous resulting in the formation of ‘tropical heath forests’ (locally known as ‘kerangas’). Here the soil is podsolised and sandy. The rest of the site is covered in stiff clay and soft mud.

The mean tidal range in Sungai Salak, which forms the eastern boundary of the site, is 5.5m. Salinity at Salak ranges from 25-30 p.p.t.

The site comprises a deltaic mangrove system with an extensive network of marine waterways and creeks interconnecting the major rivers – Sg. Sibu Laut and Sg. Salak.

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**15. 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 main river catchment area lies to the south in Kuching district.

The catchment experiences a humid tropical climate with an annual rainfall of 3,600 - 4,000 mm. The region is not directly exposed to the northeast monsoon. The rainfall is lowest during June and July, and reaches a peak in December and January.

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**16. Hydrological values:**

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

No study has been conducted to ascertain the hydrological values of the site. However, potential hydrological values are expected to include: shoreline stabilization, flood and erosion control and sediment trapping.

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## 17. 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.

I- Mangrove forest predominates, with exposed river banks during low tide.

## 18. General ecological features:

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

The site contains a tract of deltaic mixed mangrove-heath forest still in relatively good condition. It comprises typical mangrove species dominated by *Rhizophora*, *Sonneratia* (notably *S. alba*) and *Avicennia*. This is interspersed with small areas of *Nypa fruticans*. The mangrove canopy is at a height of about 8m. Terraces with tropical heath cover are common in the interior of site.

The site harbours such noteworthy species as the Proboscis Monkey/Langur *Nasalis larvatus* (which is endemic to Borneo and listed as ‘Endangered’ in the 2004 IUCN Red List and in Appendix 1 of CITES), and the Lesser Adjutant (which is listed as Appendix 1 under CITES and ‘Vulnerable’ in the 2004 IUCN Red List). It has value as a breeding and nursery ground for fish species, and the Estuarine Crocodile *Crocodylus porosus*.

## 19. 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.*

The Kuching Wetland National Park is the only protected site in the state where a range of mangrove flora can be seen. Six of the mangrove tree species which occur here are Protected Plants listed in the Second Schedule (Part II) of the Wild Life Protection Ordinance: *Sonneratia alba* (known as “perepat” in the local Malay language), *S. caseolaris* (“pedada”), *Avicennia alba* (“api-api hitam”), *A. lanata* (“api-api”), *A. marina* (“api-api merah”) and *A. officinalis* (“api-api sudu”).

## 20. 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 supports a Proboscis Monkey *Nasalis larvatus* population. The current population density of this species within the site is uncertain; the most-recent recorded count is from 1988, when they were thought to number no more than 200 individuals (Bennett, 1988). Proboscis monkeys are endemic to

the island of Borneo, and restricted to mangrove, lowland, riverine and swamp forest. They are listed as “Endangered” in the 2004 IUCN Red List and in Appendix 1 of CITES.

The Griffiths Silver Leaf Monkey/Langur *Trachypithecus villosus* also occurs within the site and is listed as “Data Deficient” in the 2004 IUCN Red List. It is thought to be increasingly rare in Sarawak, and confined to the coast and mangroves.

The Lesser Adjutant *Leptoptilos javanicus* listed in the 2004 IUCN Red List as ‘Vulnerable’ and in Sarawak as ‘Endangered’ has recently been recorded within the site.

The Estuarine Crocodile *Crocodylus porosus* occurs within the site and in the mangrove areas adjacent to the site. Surveys of the site in the mid to late 1990’s recorded a relative density of 0.2 – 2.2 individuals per km of river (Lading, E. *pers comm.*). A more recent survey of an area within the vicinity of the site recorded the highest relative density of all rivers surveyed in Sarawak (6.8 individuals per km), and evidence suggests that the population of this species in the area is increasing.

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## 21. 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.

Current socio-economic values of the site derive from recreation and tourism.

The mangrove swamps provide breeding and nursery grounds for many commercially-important species of fishes and prawns, and are thus of great importance in maintaining the region's marine fisheries. The site has considerable potential for tourism development, being an area of outstanding natural beauty in close proximity to Kuching City, and the Damai Beach Resort complex.

The Santubong area is of historical importance: there was a Chinese settlement there probably as early as the 1<sup>st</sup> century AD. Excavations at Santubong Village (located approximately 5km to the north-east of the Kuching Wetlands National Park) have found evidence early Malay, Hindu and Buddhist relics from the 9<sup>th</sup> century AD. The discovery gold made the Santubong area an important trading and iron mining centre from the 7<sup>th</sup> to 13<sup>th</sup> centuries AD; some enigmatic rock carvings of human figures remain from this period. In the 15<sup>th</sup> century, Santubong was the site of the original Brunei Malay capital of Sarawak. The first White Rajah, James Brooke, built a holiday bungalow at Santubong; the great naturalist Alfred Russel Wallace wrote some of his important works on evolution while staying at this bungalow in the mid 1850s.

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## 22. Land tenure/ownership:

(a) within the Ramsar site:

Sarawak State Government

(b) in the surrounding area:

Sarawak State Government, some areas under private ownership (township, village, etc.) and other areas leased under Temporary Occupancy Titles (e.g. aquaculture farms and stone quarry)

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## 23. Current land (including water) use:

(a) within the Ramsar site:

The Ramsar site has been legally gazetted as a Totally Protected Area under the National Parks and Nature Reserves Ordinance (1998). Activities within the site are limited to wildlife tourism, and

recreation. Artisanal and recreational fishing activities are limited to the main rivers (Sg. Salak and Sg. Sibulaut) which form the boundary of the site.

Sand dredging operations are ongoing within the Sg. Sibulaut which forms the western boundary of the site.

(b) in the surroundings/catchment:

The site is located downstream of a high population density and development area (Semariang Batu and Matang).

Much of the area located immediately outside the southernmost boundary of the site has been cleared for development. A housing complex has been completed in this area, with an access road leading to the southern boundary of the site.

Some 1,449ha of mangrove forest adjoining the southernmost boundary of the site has been converted to an aquaculture project.

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**24. 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:

Past factors: Until mid-1986, mangrove poles were collected throughout the entire area by local people for use as building materials and in the production of charcoal, but all such exploitation has since ceased. Primate surveys in 1985 and 1990 recorded a high level of hunting of Proboscis Monkeys within the area. However, no such activity has been reported in recent years and the Proboscis Monkey population shows a high level of habituation which is further evidence that hunting no longer occurs.

Present factors: The sand-dredging operations along the western boundary of the site has resulted in the degradation of some mangrove habitat and disturbance of the waterways, with potential adverse impacts on the aquatic and wildlife resources in the area.

Potential factors: A 2003 study on flood mitigation options has proposed the construction of a flood mitigation channel through the southern portion of the site. This proposal remains to be considered by the State Government but if approved, has the potential to severely impact on the ecological character of the site. The flood mitigation options study did not include a detailed assessment of the potential environmental and socio-economic impacts of the proposed channel, but the following impacts can be inferred: Land clearing and construction-related operations are likely to result in the loss of mangrove habitat, and soil and river bank erosion, leading to increased turbidity and reduced water quality. This could have an impact on the spawning and reproduction of some aquatic species. The operation of the channel will result in the periodic influx of a considerable volume of freshwater into a predominantly saline habitat, which could potentially cause die-off of fringing mangrove vegetation. In the longer term this will reduce the tourism and recreational potential of the area.

(b) in the surrounding area:

Present factors: The site is located downstream of a high population density and development area (Semariang Batu and Matang), and could potentially suffer environmental degradation from untreated solid and liquid waste, and land-clearing activities.

The road leading to the southernmost boundary of the site and the proposed expansion of the housing development project are likely to increase access into the site.

The stone quarrying operation in the Pulau Salak area is likely to have an adverse impact on the water quality in the Sg. Salak, which forms the eastern boundary of the site.

Potential factors: The new Federal Administrative Complex is being constructed at a location some 15 km west of the site. The infrastructure development plan for complex includes a proposed road network, which is likely to pass close to the southern boundary of the site.

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**25. 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.

Pursuant to section 20 of the National Parks and Nature Reserves Ordinance (1998), the Kuching Wetland National Park (6,610ha) was constituted as a national park with effect from 24th July, 2002 (Gazette No.: 3512, date of publication: 10<sup>th</sup> October 2002).

Current conservation measures include the training of key stakeholders in site assessment for the purposes of Ramsar site designation, and in management planning.

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

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

A Special Park Committee will be established to co-manage the national park and its surrounding areas as provided for under Section 8 of the National Parks and Nature Reserves Ordinance, 1998.

A comprehensive management plan is proposed to be developed using the 5-S Site Conservation Management Plan planning framework (developed by The Nature Conservancy).

A comprehensive infrastructure development proposal had been submitted to the Ministry of Natural Resources and Environment under the Ninth Malaysian Plan (2006 – 2010). Under this proposal, an administrative office and other park management infrastructure will be constructed, and trained staff employed to manage the site.

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

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

There is currently no scientific research being carried out within the site. The Malaysian Nature Society has been monitoring the dolphin and bird populations in the surrounding area, which has been identified as an Important Bird Area (IBA).

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**28. Current conservation education:**

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

None.

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**29. Current recreation and tourism:**

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

Three private tour companies run wildlife boat cruises in the area. The cruise follows set routes along the main waterways leading to and within the site. Sport fishermen frequent the main rivers (Sg. Salak and Sg. Sibulaut) which form the eastern and western boundaries of the site respectively.

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**30. Jurisdiction:**

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

The Kuching Wetlands National Park is wholly-owned by the State Government of Sarawak, and managed and administered by the Sarawak Forestry Corporation.

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**31. 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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**32. Bibliographical references:**

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

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