Information Sheet on EAA Flyway Network Sites (SIS) – 2017 version

Available for download from http://www.eaaflyway.net/about/the-flyway/flyway-site-network/

Categories approved by Second Meeting of the Partners of the East Asian-Australasian Flyway Partnership in Beijing, China 13-14 November 2007 - Report (Minutes) Agenda Item 3.13

Notes for compilers:

1. The management body intending to nominate a site for inclusion in the East Asian - Australasian Flyway Site Network is requested to complete a Site Information Sheet. The Site Information Sheet will provide the basic information of the site and detail how the site meets the criteria for inclusion in the Flyway Site Network. When there is a new nomination or an SIS update, the following sections with an asterisk (*), from Questions 1-14 and Question 30, must be filled or updated at least so that it can justify the international importance of the habitat for migratory waterbirds.

2. The Site Information Sheet is based on the Ramsar Information Sheet. If the site proposed for the Flyway Site Network is an existing Ramsar site then the documentation process can be simplified.

3. Once completed, the Site Information Sheet (and accompanying map(s)) should be submitted to the Flyway Partnership Secretariat. Compilers should provide an electronic (MS Word) copy of the Information Sheet and, where possible, digital versions (e.g. shapefile) of all maps.

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1. Name and contact details of the compiler of this form *:

EAAF SITE CODE FOR OFFICE USE ONLY:

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2. Date this sheet was completed *:

DD/MM/YYYY

01/12/2011

3. Country *:

Republic of Indonesia

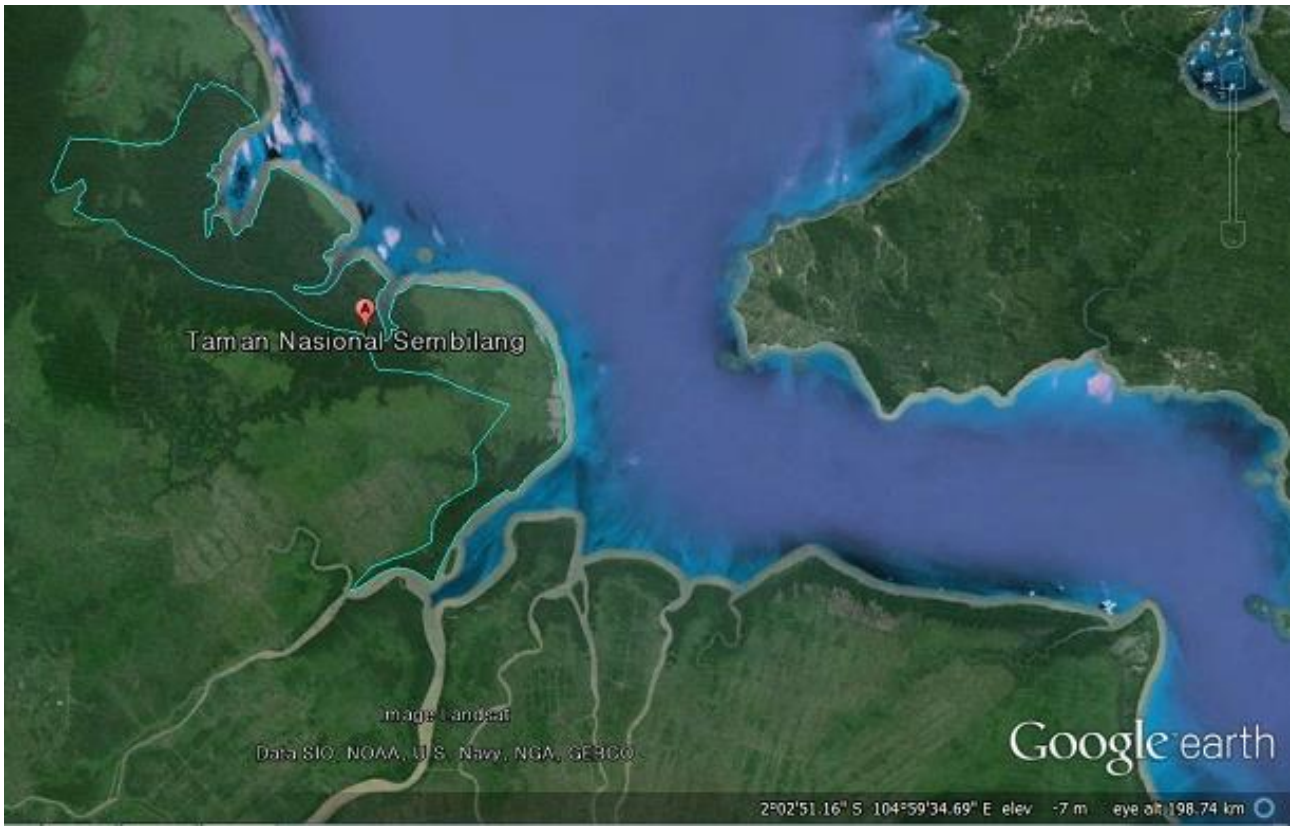
4. Name of the Flyway Network site *:

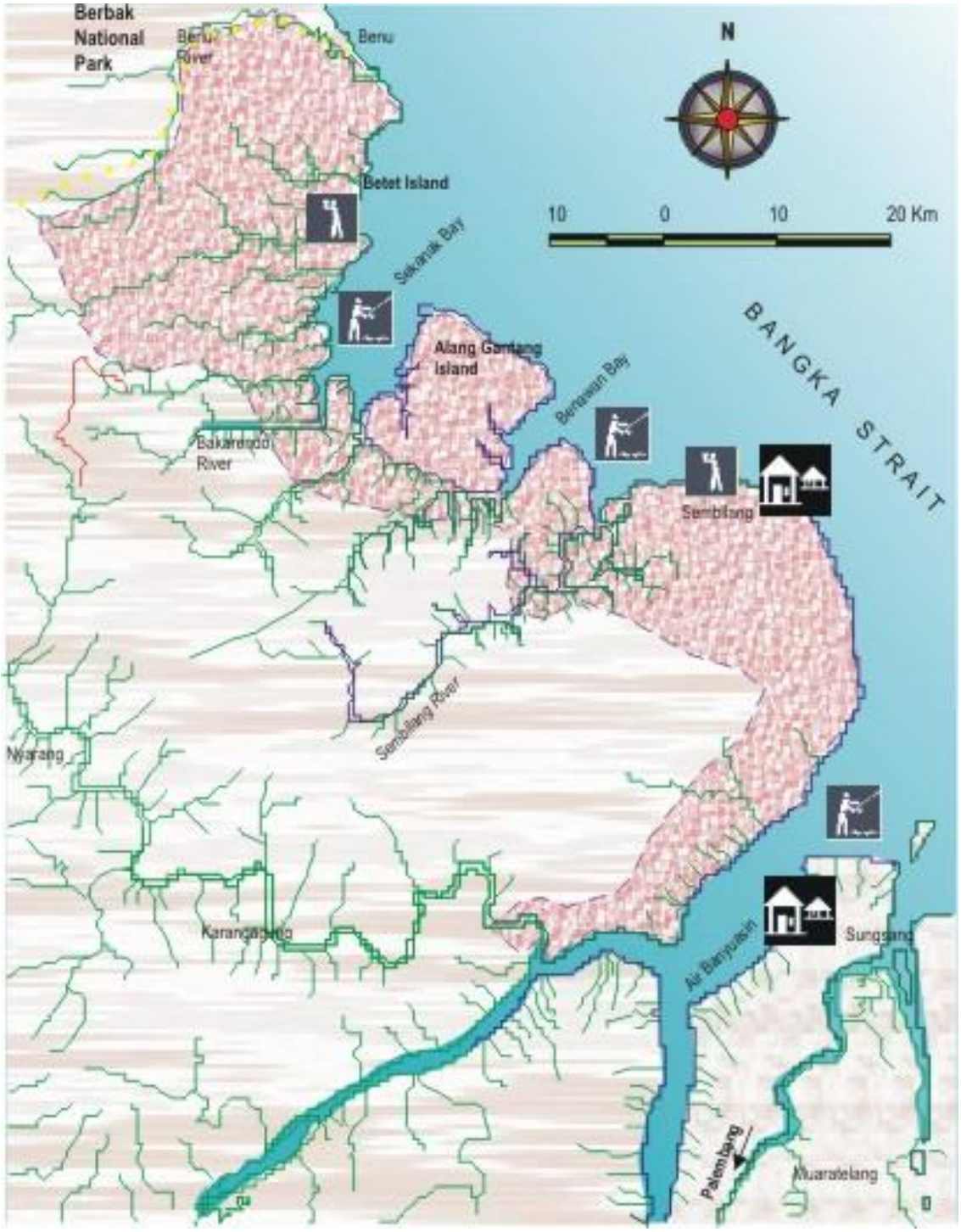
Accepted English transcription of the Site's name.

Sembilang National Park [Taman Nasional Sembilang]

5. Map of site *:

The most up-to-date available and suitable map of the wetland should be appended to the SIS (only in digital format and shape file). The map must clearly show the boundary of the site. Please refer to the "Digitising Site Boundaries in Google Earth" file linked here.





6. Geographical coordinates (latitude/longitude, in decimal degrees) ***:**

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.

1.917 S, 104.633 E ($104^0$14' – $104^0$54' E and $1^0$53' – $2^0$27' S)

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

0 – 20 m a.s.l.

8. Area *:

The total area of the site, in hectares. If the areas of discrete site units are known, please also list each of these together with the names (or labels) used to identify and differentiate these units.

Total area: 202,896.31 hectares, consisting of

- Core zone : 83,361.69 ha
- Wilderness zone : 94,956.59 ha
- Utilization zone : 4,117.83 ha
- Traditional zone : 5,272.61 ha
- Rehabilitation zone : 12,286.67 ha
- Specific treatment zone : 2,900.92 ha

9. General overview of the site *:

A brief (two sentences) summary of the site, mentioning principal physical and ecological functions, and its importance for migratory waterbirds.

Sembilang National Park has the largest and best remaining mangrove habitat in the east coast of Sumatra, as well as vast tidal flat that harbors huge number of both resident and migratory waterbirds. It has one of the most complex shorebirds communities globally - about 100,000 migratory waterbirds have been observed use this site to feed and rest.

10. Justification of Flyway Site Network criteria *:

Please provide waterbird count information (with year of latest count) that demonstrates that the site meets the criteria of the Flyway Site Network (Annex 1). That is:

- it regularly supports > 20 000 migratory waterbirds; or,
- it regularly supports > 1 % of the individuals in a population of one species or subspecies of migratory waterbird; or,
- it supports appreciable numbers of an endangered or vulnerable population of migratory waterbird
- it is a “staging site” supporting > 5 000 waterbirds, or > 0.25% of a population stage at the site.

A listing of the populations of migratory waterbirds covered by the East Asian – Australasian Flyway Partnership and the 1% thresholds is attached (Annex 3).

The “staging site” criterion is particularly difficult to apply and application of this should be discussed with the Secretariat. Also note that some species have several populations that are very difficult to distinguish in the field.

- The National Park is one of the most important sites along the East Asian – Australasian Flyway. The most common migratory shorebirds are Terek Sandpiper, Common Redshank, Black-tailed Godwit and Bar-tailed Godwit;

- The total number of migratory shorebirds using the area is estimated 0.5 – 1 million, with a record of 80,000 – 100,000 migratory birds has been observed at one time (Danielsen & Verheught, 1990);
- The National Park regularly support >1% of the following global population (both resident waterbirds and migratory shorebirds):
    - Asian Dowitcher *Limnodromus semipalmatus* : 10,000 – 13,000 (1% of Flyway population: 230 individual)
    - Spotted Greenshank *Tringa guttifer* : 28 (1% of Flyway population: 8 individual)
    - Far Eastern Curlew *Numenius madagascariensis* : 2,600 (1% of Flyway population: 380 individual)
    - Milky Stork* *Mycteria cinerea* : 1,000 (1% of Flyway population: 50 individual)
    - Lesser Adjutant* *Leptoptilos javanicus* : 300 (1% of Flyway population: 50 individual)

    **Two species marked with an asterisk are regarded as non-migratory waterbirds in the Flyway.*

11. Wetland Types *:

List the wetland types present (see Annex 2). List the wetland types in order of their area in the Flyway Network site, starting with the wetland type with the largest area.

a) presence:

Marine/coastal: F

Inland: U, W, Xf , Xp

Human-made: 1

b) dominance:

Marine/coastal: F

Inland: Xf, Xp, W, U

Human-made: 1

12. Jurisdiction *:

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

Sembilang National Park is under the national jurisdiction of Ministry of Forestry. Administratively it is located in Banyuasin District, South Sumatra Province.

13. 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 and the title and/or name and email address/phone number of the person or persons in this office with direct responsibility for managing the wetland.

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14. Bibliographical references *:

A list of key technical references relevant to the wetland, including management plans, major scientific reports, and bibliographies, if such exist. Please list Web site addresses dedicated to the site or which prominently feature the site, and include the date that the Web site was most recently updated. When a large body of published material is available about the site, only the most important references need be cited, with priority being given to recent literature containing extensive bibliographies.

- Anonymous. 2003. Forestry Ministerial Decree Number 95/Kpts-II/2003 dated March 19th, 2003
- Anonymous. 2008. Sembilang National Park Profile
- Danielsen & Verheught. 1990. Berbak-Sembilang Project
- Wetlands International.2006. Water bird Population Estimates Fourth Edition.

15. 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.

Sembilang National Park mostly consists of estuarine formations. About 70 smaller rivers flow inside the park. This area is dominated by mangrove ecosystems with the formation of Palembang sediment.

During the Pleistocene era, this area was at the Sundanese Plate periphery. During the Holocene era, this site was flooded due to the higher sea level at that time.

This area is now covered by marine clay and river sediments. It is dominated by alluvial sediments, including marine sediments and organic sediments at the shoreline, and organic deposit, usually in the form of peat formation inland.

The tide varies between 1.6 and 2.8 meters, and sometimes reach 3.5 meters. Most of this conservation area is influenced by the tide. The site has a tropical climate with an average rainfall of about 2,455 mm per year (1989-1998).

The dry season is from May to October, while the wet season with strongest north-west wind occur from November to April. Based on Oldeman Climatic Classification, the national park is in the "C Zone", meaning it has 5 to 6 wet months continuously, and approximately/more than 3 months of dry season.

The quality of river water is considered to be good. Otters are found in the park, and which are thought to be good indicators of water quality.

16. Physical features of the catchment area:

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

Topographic condition of the catchment area, generally, is in the form of hollow level off, or in local

language is "lebak lebung". Generally, the soil consists of Histosol (including *typic haplohemists, typic hydraquents, typic sulfaquents, histic sulfaquent, sodic psammaquents*) and Inceptisol (including *sulfic endoaquepts* and *typic sulfaquepts*).The deepest peat formation lies at the border between South Sumatra Province and Jambi Province, in this case, it lies between Sembilang National Park and Berbak National Park.

17. Hydrological values:

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

Swamps and peat forests play important roles in balancing the hydrological system in the Park. Peat swamp forests and mangroves function as catchment and container areas to store fresh water from rainfall. This water is stored and recharges the ground water table, water gradually feeds the 70 small rivers meandering in the Park.

Mangrove greenbelt in Sembilang National Park reduces sedimentation in shallow coastal waters, which are used for water transportation routes. Carbon is being stored in peat land forests in Sembilang National Park.

Mangrove forests reduce salt-water intrusion to inland agricultural areas, e.g. transmigration villages surrounding the National Park. Mangrove forests also function to reduce pesticide pollution (from agricultural land) in fishing grounds. From year to year, mangroves protect Terusan Dalam Sub Villages from hurricane and other natural disasters.

18. General ecological features:

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

The Sembilang National Park is located in the eastern coast of South Sumatra, between the Banyuasin, Merang and Benu rivers, forms part of the vast coastal swamp lands of eastern Sumatra. It covers coastal area, mainly comprising mangrove, freshwater and peat swamp forests. Forming a natural corridor to the Berbak National Park. The Park is among the most complex, diverse and biologically productive swamp ecosystem in the tropics (Danielsen and Verheugt, 1990). The extensive deterioration of the Southeast Asian swamp forest formations have left the Sembilang area as one of the very last examples where extensive mangrove and freshwater/peat swamp forest occur in a relatively good transition. This underlines the importance of the area as a gene pool for a number of internationally endangered species.

19. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy 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 SIS.*

(Please add here the species which do not come under sec no 14)

Plant species in swampy areas include *Dyera sp*. (Jelutung), *Instia palembanica* (Merbau), *Alstonia pneumatophora* and *Oncosperma tigillarium*; local orchids, such as *Cymbidium hartinahiahium* and *Dendrobium macrophylum*.

Mangrove forests grow 35 km inland and is one of the best mangrove belts on the eastern shore of Sumatra. The mangrove trees are big and tall enough for the Milky Stork to nest in, which provide security for the breeding birds from the beginning of breeding season until the chicks are independent. Traditionally, local communities utilize leaves of Nipah Palm *Nypa fruticans* for roofs.

20. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 10. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the SIS.*

(Please add here the species which do not come under sec no 14)

The National Park is home to 213 bird species, 53 mammals, 142 fish, 38 crabs, 13 shrimps and no less than 18 reptilian species.

Some noteworthy fauna are including:

Birds : Chinese egret *Egretta eulophotes* (Vulnerable), Milky Stork *Mycteria cinerea* (Vulnerable), Storm's Stork *Ciconia stormi* (Endangered), Lesser Adjutant *Leptoptilos javanicus* (Vulnerable), White-winged Duck *Cairina scutulata* (Endangered), Far Eastern Curlew *Numenius madagascariensis* (Vulnerable), Spotted Greenshank *Tringa guttifer* (Endangered), Great Knot *Calidris tennuirostris* (Vulnerable)

Reptiles : King Cobra *Ophiophagus hannah* (Vulnerable), Sunda Gharial *Tomistoma schlegelii* (Endangered), Estuarine Crocodile *Crocodylus porosus* (App I), Malayan Giant Turtle *Orlitia borneensis* (Endangered), Malayan Box Turtle *Coura amboinensis* (Vulnerable), Asiatic Soft-shell Turtle *Anryda cartilaginea* (Vulnerable)

Mammals : Sun Bear *Helarctos malayanus* (Vulnerable), Small-clawed Otter *Aonyx cinerea* (Vulnerable), Eurasian Otter *Lutra lutra* (Vulnerable), Smooth Otter *Lutra perspicillata* (Vulnerable), Hairy-nosed Otter *Lutra sumatrana* (Vulnerable), Otter Civet *Cynogale bennettii* (Endangered), Sumatran Tiger *Panthera tigris sumatrae* (Critically Endangered), Clouded Leopard *Neofelis nebulosa* (Vulnerable), Marbled Cat *Pardofelis marmorata* (Vulnerable), Flat-headed Cat *Prionailurus planiceps* (Vulnerable), Indian Elephant *Elephas maximus* (Endangered), Malayan Tapir *Tapirus indicus* (Endangered), Sambar *Cervus unicolor* (Vulnerable), Irrawaddy Dolphin *Orcaella brevirostris* (Vulnerable), Finless Porpoise *Neophocaena phocaenoides* (Vulnerable)

Fish (of economic importance) : Sembilang (*Plotosus canius*), Kakap (*Lutjanus* sp.), Grouper (*Epinephelus tauvina*), Toman (*Channa micropeltes*), Betutu (*Ophiocara porocephala*), Bawal Putih (*Pampus argenteus*), Brengkes (*Scomberomus sexfasciatus*), Belanak (*Mugil voigiensis*)

Invertebrates (of economic importance) : Lobster (*Thalassina anomila*), Crab (*Ucha* and *Scylla serrata dussumieri*), White Shrimp (*Penaeus marquensis*), Shrimp Dogol (*Penaeus indicus*),
Tiger Shrimp (*Penaeus semisulcatus*), Tiger Prawn (*Penaeus monodon*) and the Small crab (*Portunus* spp.).

21. Social, economic and cultural values:

a) Describe if the site has any general social, economic 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:

In term of economic activities, Sembilang waters provide spawning and nursery habitat for many commercially important fish species, and thus provides income opportunity for people living on the adjacent areas as well as the Province's capital of Palembang. Data from the Fisheries Department shows that about 140,000 tons of fish are caught annually by using 600 – 1,000 fishing vessels. On inland based livelihood activities, forest resources also provide livelihood for local communities living on the buffer zone of the Park, including the collection of Nipah leaves, Nibung stem, Rattan and tapping of Jelutung trees. An economic valuation study carried out by Wetlands International shows that the total economic value of the Sembilang wetlands is calculated at about Rp. 122 – 416 billion per year. If the value of carbon stored is added, the Net Present Value might even achieve more than Rp.325 billion. The major benefits are obtained from coastal fisheries and as capturable biodiversity values. The later partially includes monetary aspects of the uniqueness of the landscape, habitat, flora and fauna. However, the real value might only be revealed, once it lost, and all the resulting damage is directly felt.

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? (Double-click the checkbox to check and choose "Checked" under "Default Value" from "Check Box Form Field Options" window)

All year, "lebak lebung" as one of the local mechanism/system of gathering fish, shrimps and crabs, is practiced by local fishers, under national park and sub district supervision. The application of this traditional harvesting system helps to protect the mangrove ecosystem, which results in the preservation of the best mangrove belt in the region. The local people do not cut the trees extensively, nor use fish poison or the fish bombs when fishing (use of eco-friendly fishing tools).

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: ☐

22. Land tenure/ownership:

a) Within the Flyway Network site:

The Government of Indonesia. The status of National Park was declared on March 19, 2003.

b) In the surrounding area:

- Central Government: Berbak National Park (Ramsar Site)
- Province (Forest Service): Protected forest
- Private: Plantation, production forest, transmigration site

23. Current land (including water) use:

a) Within the Flyway Network site:

Conservation area consists of the following zones:

- Core Zone, part of the national park that is in very good condition. Its physical features still in original state and have not yet been exploited. It is designated to be fully protected (83,884.80 ha);
- Wilderness Zone, is another protected zone, to protect the core zone (100,418.41 ha)
- Utilization Zone, designated for tourism and other environmental services for local communities (356.45 ha);
- Traditional Zone, mostly a web of rivers which serves to accommodate local transportation routes (6,237.90 ha);
- Rehabilitation/Restoration Zone, is specifically designated for rehabilitation/restoration activities (is 10,465.11 ha);
- Specific treatment zone, which contains local villages that existed before the national park was created (478.11 ha).

b) In the surroundings/catchment:

- Human settlements
- Paddy fields/agriculture farms
- Aquaculture ponds
- Palm oil plantations
- Timber estates
- Concession forests
- Protected forests
- Other economic activities.

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 Flyway Network site:

- Past: Aquaculture practice, logging
- Present: Aquaculture practice, logging
- Potential: Human settlement (limited)

b) In the surrounding area:

- Past: logging (legal and illegal)
- Present: Logging (legal and small scale illegal logging)
- Potential: Development of international harbor and industrial estate.

25. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Flyway Network 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.

- National Park (Government of Indonesia)
- Ramsar Site (Ramsar Convention)

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate, see Annex 3):

Ia ☐; Ib ☒; II ☐; III ☐; IV ☐; V ☐; VI ☐; N/A ☐

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

By law, Sembilang National Park management must always relate all of its implementation efforts to the Management Plan (20 year span), which is comprised of 4 related Strategic Plans (5 year span) and 20 Annual Work Plan (yearly). At this time, the Sembilang National Park Management Plan (20 year) is being reviewed and subject to official approval in the near future. The management plan is not yet finished. Public consultation for the proposed management plan was held on May 2009. Based on the 2010 Annual Work Plan, the management plan is scheduled to be officially approved in 2010

If yes, is it being implemented?: If no, is one being planned?

d) Describe any other current management practices:

- The implementation of Conservation Village Model as part of a buffer zone development strategy;
- Indicative zoning (prepared through public consultation process) works as a fundamental stage to guide park management
- Conducting smart patrol with implementation the Resort Based Management (resort as the smallest unit within national park).

26. Conservation measures proposed but not yet implemented:

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

- Restoration Master Plan
- Ecotourism Development Plan
- Management for Coastal Human Settlement (Conservation Village Model)
- Integrated Patrol System
- Buffer Zone Management
- The Center of Conservation Education
- Mangrove Ecosystem Research Centre

27. Current scientific research and facilities:

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

Recently, there is no research conducted at the park. However, incidental research/surveys/explorations are conducted by university students/local NGO/other Governmental Institutions. Currently, it has no permanent research station.

The following activities have been implemented since 2007:

- Regular survey for Milky Stork (*Mycteria cinerea*);
- Regular survey for migratory birds (by National Park);
- Isolation, Selection and Characteristic of Selulotic Bacterium from Mangrove Duff in Sembilang National Park (conducted by student from Sriwijaya University);
- The Impact of Social Economy of National Park for Sembilang Sub Village (conducted by a student from Muhammadiyah University);
- Coastal Forest Inventory in Sembilang National Park (conducted by a student from Muhammadiyah University (South Sumatra);
- Importance and Existence Value of Mangroves, for Community in/surrounding the Park and it's Implication for Conservation Efforts (conducted by a student for a Masters Degree from Andalas University (West Sumatra);
- Exploration of Pandanaceae (conducted by Plant Resources of South East Asia);
- Assessment of Conservation Village Model (by Gadjah Mada University);

- Community Potential Study for Supporting the development of Conservation Village Model

28. 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.

- The National Park has no permanent visitor centre, observation hide, nature trails or facilities for school visits;
- Several leaflets, booklets, posters or other extension materials have been produced to be distributed to surrounding villages;
- Students visits;
- Information of Sembilang National Park has been displayed on national/local TV and National/local newspapers, and is prepared in multimedia formats;
- Other methods of promotion through Provincial Expo or other Regional Expos.

29. Current recreation and tourism:

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

The national park is still in the process of being developed as an ecotourism destination in Indonesia. There are three preparation stages in terms of ecotourism development: (1) Identification of points of interest for ecotourism; (2) development planning for ecotourism; and (3) coordination with other related institutions at both provincial and district level.

The site is being prepared specifically for eco-tourism. So far, the eco-tourism activities have not been well managed. Most of the visitors visit the park for research, not for recreation.

The management plan is not yet finished. Public consultation for the proposed management plan was held on May 2009. Based on the 2010 Annual Work Plan, the management plan is scheduled to be officially approved in 2010.

30. Threats *:

Which of the following threats is present historically – when the threat stopped but the effects are still there (H), currently (C) or potentially (P)?

	Historically	Currently	Potentially
Residential and commercial development			
housing and urban areas	☐	☐	☐
commercial and industrial areas	☐	☐	☐

tourism and recreation areas	☐	☐	☐
Agriculture and aquaculture			
annual and perennial non-timber crops	☐	☐	☐
wood and pulp plantations	☐	☐	☐
livestock farming and ranching	☐	☐	☐
marine and freshwater aquaculture	☐	☐	☐
Energy production and mining			
oil and gas drilling	☐	☐	☐
mining and quarrying	☐	☐	☐
renewable energy	☐	☐	☐
Transportation and service corridors			
roads and railroads	☐	☐	☐
utility and service lines	☐	☐	☐
shipping lanes	☐	☐	☐
flight paths	☐	☐	☐
Biological resource use			
hunting and collecting terrestrial animals	☐	☐	☐
gathering terrestrial plants	☐	☐	☐
logging and wood harvesting	☐	☐	☐
fishing and harvesting aquatic resources	☐	☐	☐
Human intrusions and disturbance			
recreational activities	☐	☐	☐
war, civil unrest and military exercises	☐	☐	☐
work and other activities	☐	☐	☐
Natural system modifications			
fire and fire suppression	☐	☐	☐
dams and water management/use	☐	☐	☐
other ecosystem modifications	☐	☐	☐
Invasive and other problematic species and genes			
invasive non-native/alien species	☐	☐	☐

problematic native species	☐	☐	☐
introduced genetic material	☐	☐	☐
Pollution			
household sewage and urban waste water	☐	☐	☐
industrial and military effluents	☐	☐	☐
agricultural and forestry effluents	☐	☐	☐
garbage and solid waste	☐	☐	☐
air-borne pollutants	☐	☐	☐
excess energy	☐	☐	☐
Geological events			
volcanoes	☐	☐	☐
earthquakes/tsunamis	☐	☐	☐
avalanches/landslides	☐	☐	☐
Climate change and severe weather			
habitat shifting and alteration	☐	☐	☐
droughts	☐	☐	☐
temperature extremes	☐	☐	☐
storms and flooding	☐	☐	☐

Please write here any additional threats and comments/queries you have on the threats.

Annex 1: Criteria for the inclusion of sites in the Flyway Site Network

(From the Partnership Text)

To be considered for inclusion in the Flyway Site Network, this Partnership adopts the following criteria:

a. Convention on Wetlands (Ramsar, Iran, 1971) criteria for internationally important sites for migratory waterbirds. That is:

   Criterion 2: A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.

   Criterion 5: A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds.

   Criterion 6: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

b. The staging criteria as applied under the Asia - Pacific Migratory Waterbird Conservation Strategy. That is:

   i. A staging site should be considered internationally important if it regularly supports 0.25% of individuals in a population of one species or subspecies of waterbirds on migration.

   ii. A staging site should be considered internationally important if it regularly supports 5,000 or more waterbirds at one time during migration.

c. Under exceptional circumstances a site can be nominated if it supports migratory waterbirds at a level or stage of their life cycle important to the maintenance of flyway populations. Justification of such nominations will be considered by the Partnership on a case by case basis.

Annex 2: Ramsar Classification System for Wetland Type

The codes are based upon the Ramsar Classification System for Wetland Type as approved by Recommendation 4.7 and amended by Resolutions VI.5 and VII.11 of the Conference of the Contracting Parties. The categories listed herein are intended to provide only a very broad framework to aid rapid identification of the main wetland habitats represented at each site.

To assist in identification of the correct Wetland Types to list in section 19 of the RIS, the Secretariat has provided below tabulations for Marine/Coastal Wetlands and Inland Wetlands of some of the characteristics of each Wetland Type.

Marine/Coastal Wetlands

A -- **Permanent shallow marine waters** in most cases less than six metres deep at low tide; includes sea bays and straits.

B -- **Marine subtidal aquatic beds**; includes kelp beds, sea-grass beds, tropical marine meadows.

C -- **Coral reefs**.

D -- **Rocky marine shores**; includes rocky offshore islands, sea cliffs.

E -- **Sand, shingle or pebble shores**; includes sand bars, spits and sandy islets; includes dune systems and humid dune slacks.

F -- **Estuarine waters**; permanent water of estuaries and estuarine systems of deltas.

G -- **Intertidal mud, sand or salt flats**.

H -- **Intertidal marshes**; includes salt marshes, salt meadows, saltings, raised salt marshes; includes tidal brackish and freshwater marshes.

I -- **Intertidal forested wetlands**; includes mangrove swamps, nipah swamps and tidal freshwater swamp forests.

J -- **Coastal brackish/saline lagoons**; brackish to saline lagoons with at least one relatively narrow connection to the sea.

K -- **Coastal freshwater lagoons**; includes freshwater delta lagoons.

Zk(a) – **Karst and other subterranean hydrological systems**, marine/coastal

Inland Wetlands

L -- **Permanent inland deltas**.

M -- **Permanent rivers/streams/creeks**; includes waterfalls.

N -- **Seasonal/intermittent/irregular rivers/streams/creeks**.

O -- **Permanent freshwater lakes** (over 8 ha); includes large oxbow lakes.

P -- **Seasonal/intermittent freshwater lakes** (over 8 ha); includes floodplain lakes.

Q -- **Permanent saline/brackish/alkaline lakes**.

R -- **Seasonal/intermittent saline/brackish/alkaline lakes and flats**.

Sp -- **Permanent saline/brackish/alkaline marshes/pools**.

Ss -- **Seasonal/intermittent saline/brackish/alkaline marshes/pools**.

Tp -- **Permanent freshwater marshes/pools**; ponds (below 8 ha), marshes and swamps on inorganic soils; with emergent vegetation water-logged for at least most of the growing season.

Ts -- **Seasonal/intermittent freshwater marshes/pools on inorganic soils**; includes sloughs, potholes, seasonally flooded meadows, sedge marshes.

U -- **Non-forested peatlands**; includes shrub or open bogs, swamps, fens.

Va -- **Alpine wetlands**; includes alpine meadows, temporary waters from snowmelt.

Vt -- **Tundra wetlands**; includes tundra pools, temporary waters from snowmelt.

W -- **Shrub-dominated wetlands**; shrub swamps, shrub-dominated freshwater marshes, shrub carr, alder thicket on inorganic soils.

Xf -- **Freshwater, tree-dominated wetlands**; includes freshwater swamp forests, seasonally flooded forests, wooded swamps on inorganic soils.

Xp -- **Forested peatlands**; peatswamp forests.

Y -- **Freshwater springs; oases**.

Zg -- **Geothermal wetlands**

Zk(b) – **Karst and other subterranean hydrological systems**, inland

Note: "**floodplain**" is a broad term used to refer to one or more wetland types, which may include examples from the R, Ss, Ts, W, Xf, Xp, or other wetland types. Some examples of floodplain wetlands are seasonally inundated grassland (including natural wet meadows), shrublands, woodlands and forests. Floodplain wetlands are not listed as a specific wetland type herein.

Human-made wetlands

1 -- **Aquaculture** (e.g., fish/shrimp) **ponds**

2 -- **Ponds**; includes farm ponds, stock ponds, small tanks; (generally below 8 ha).

3 -- **Irrigated land**; includes irrigation channels and rice fields.

4 -- **Seasonally flooded agricultural land** (including intensively managed or grazed wet meadow or pasture).

5 -- **Salt exploitation sites**; salt pans, salines, etc.

6 -- **Water storage areas**; reservoirs/barrages/dams/impoundments (generally over 8 ha).

7 -- **Excavations**; gravel/brick/clay pits; borrow pits, mining pools.

8 -- **Wastewater treatment areas**; sewage farms, settling ponds, oxidation basins, etc.

9 -- **Canals and drainage channels, ditches.**

Zk(c) -- **Karst and other subterranean hydrological systems**, human-made

Annex 3: IUCN Protected Areas Categories System

IUCN protected area management categories classify protected areas according to their management objectives. The categories are recognised by international bodies such as the United Nations and by many national governments as the global standard for defining and recording protected areas and as such are increasingly being incorporated into government legislation.

Ia Strict Nature Reserve

Category Ia are strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphical features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values.

Ib Wilderness Area

Category Ib protected areas are usually large unmodified or slightly modified areas, retaining their natural character and influence without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.

II National Park

Category II protected areas are large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible, spiritual, scientific, educational, recreational, and visitor opportunities.

III Natural Monument or Feature

Category III protected areas are set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove. They are generally quite small protected areas and often have high visitor value.

IV Habitat/Species Management Area

Category IV protected areas aim to protect particular species or habitats and management reflects this priority. Many Category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.

V Protected Landscape/ Seascape

A protected area where the interaction of people and nature over time has produced an area of distinct charcter with significant, ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.

VI Protected area with sustainable use of natural resources

Category VI protected areas conserve ecosystems and habitats together with associated cultural values and traditional natural resource management systems.