

Information Sheet on Flyway Network Sites

Notes for compilers:

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.

The Site Information Sheet has been divided into two sections. Part 1 (Section 1-14) seeks basic information on the site and it is essential that it be completed. Part 2 seeks additional information and is optional.

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. In this case the National Government Partner need only send a copy of the existing sheets with additional details on Question 1 and 10 of the Flyway Site Information Sheet.

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 copies of all maps.

Part 1: Essential Information

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

The full name, institution/agency, and address of the person(s) who compiled the SIS, together with any telephone and fax numbers and e-mail address.

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2. Date this sheet was completed:

The date on which the SIS was completed (or updated).

15 May 2011

3. Country:

The official (short) version of the country name.

Bangladesh

(The Peoples Republic of Bangladesh)

4. Name of the Flyway Network site:

The precise name of the designated site in the national language and English. This name will be used precisely as given on the Site certificate. Alternative names, including in local language(s), should be given in parentheses after the precise name.

Nijhum Dweep National Park

5. Map of site:

The most up-to-date available and suitable map of the wetland should be appended to the SIS (in hardcopy and, if possible, also in digital format). The map must clearly show the boundary of the site.



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.

22° 01' 01" to 22° 05' 02" N and 90° 57' 03" to 91° 03' 00" E

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

The terrain of Nijhum Dweep National Park has a gentle slope towards the sea with less than 1.5 m (maximum) to 0.2 m (minimum) elevation above mean sea level.

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.

16,352.23 ha

9. General overview of the site:

A brief summary of the site (limited to not more than two sentences), mentioning principal physical and ecological functions, and its importance for migratory waterbirds.

Nijhum Dweep is situated in the intertidal zone of the coastal area of Bangladesh. Domar char under the area of Nijhum Dweep national part, situated in the east of Nijhum Deweep is an important site for many endangered migratory species. The mudflats of Nijhum Dweep is an important wetland site for wintering migratory as well as resident birds including several globally threatened waterbird species like Spoon-billed Sand piper, Asiatic Dowitcher, Spotted Greenshank, etc.

10. Justification of Flyway Site Network criteria:

Please provide waterbird count information 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.

A2

The mudflats of Nijhum Dweep is an important wetland site for wintering migratory as well as resident birds including several globally threatened waterbird species like Spoon-billed Sandpiper, Asiatic Dowitcher, Spotted Greenshank, etc. In March 2010, 23 Spoon-billed Sandpiper, 14 Spotted Greenshank and 12 Asian Dowitcher have been recorded (Bird et al. 2010).

A5

According to mid-winter waterfowl Census in 2005, about 21,500 waterbirds of 43 species and 2,002 additional birds of only 2 species were counted in this zone. According to the Bird et al. (2010), the total estimated number of shorebirds was 34,900 in this area. This includes some globally threatened species as specified above.

A6

The Nijhum Dweep wetland regularly supports > 1 % of the individuals in a population of Spoon-billed Sandpipers.

Species	EAAF population	1% of EAAF population	Peak count (date)	Source
Spoon-billed Sandpipers	<3,000	10	23 (28 Mar 2010)	Bird et al. (2010)

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.

According to the Ramsar Classification System for wetland type, the proposed wetland site (Nijhum Dweep NP) falls under the following categories:

- I- Intertidal forested wetlands
- A- Permanent Shallow Marine waters
- G- Intertidal mud, sand or saltflats
- F- Estuarine waters
- J- Coastal Brackish saline lagoons

12. Jurisdiction:

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

Territorial Jurisdiction - South Asia/Bangladesh

Functional Jurisdiction -Ministry of Environment and Forests, Sectoral Jurisdiction- Directorate of Forests

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. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Forest Department of Bangladesh

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 any functional/active 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.

1. Anisuzzaman Khan, 2004. Nijhum Dweep, global hotspot for migratory shorebirds, IUCN, The Daily Star, 19th March, 2004.
2. Asian Wetland Directory (1991)
3. Bird, P. J., Lees, A. C., Chowdhury, S. U., Martin. R & Haque, U. H. (2010) A survey of the Critically Endangered Spoon-billed Sandpiper *Eurynorhynchus pygmeus* in Bangladesh and key future research and conservation recommendations. Forktail 26: 1-8
4. Feasibility Study of Fisheries Component, Fishery Resources of NIJHUM DWIP, March 1997.MES,
5. Harun Er Rashid, Department of Environmental Science and Management, Independent University. Case study of Bangladesh: Water resources and population pressures in the Ganges Basin.
6. Household Agri. Survey, MES, March, 1997.
7. Name of Islands with District & Thana for MES Project Area, 1997.
8. Nijhum Dwip Integrated Development Project, MES, 1997
9. J. B. Smith et al. (eds). Adaptation to climate change: An international Perspective. NewYork: Springer-Verlag. PP. 335-342.
10. PDO-ICZMP, 2004. Areas with special status in the coastal zone. Program Development Office for the Integrated Coastal Zone Management Plan.
11. Sajahan Sarder (2005). Bangladesh Mid-winter waterfowl census 2005, NCC, Department of Environment, Government of Bangladesh and UNDP, 16p.

Part 2 – Optional

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.

The surfacing of Nijhum Dweep started during 1960s as a result of sediment deposition discharged by three mighty rivers namely, the Ganges, the Meghna and the Brahmaputra. The sediments are then reworked and redistributed particularly by wave and tide to form sand bars and lagoons and subsequently settled through afforestation since 1972.

Nijhum Dweep is a part of the Young Lower Meghna Estuarine Floodplain. The soils are seasonally flooded, poorly drained and have been developed from moderately fine textured silt loams. The surface soil is medium textured silt loam, usually slightly calcareous and alkaline in nature. They are flooded to less than 30 cm for 3 to 4 months in the monsoon season.

16. Physical features of the catchment area:

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

The physical feature of the catchment area is almost similar to the proposed site.

17. Hydrological values:

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

The Nijhum Dweep is situated at the estuary of the Meghna River. River water carries sediments during rainy season. So accretion and erosion is a regular phenomenon in and around the island. The water is saline. The water salinity decreases during rainy season and increases during dry season.

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.

Ecosystems in the coastal zone are highly diverse and robust and include aquatic and terrestrial ecosystems encompassing saline water, brackish water and fresh water arena. Land area of the coastal zone has mud flat, sandy beach & sand dunes, flatlands and undulating terrain that houses different ecosystems with diverse and range of habitats.

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)

The man-made coastal mangrove of Nijhum Dweep NP is unique and was created by Forest Department on newly accreted land under different coastal afforestation programs since 1972. The principal species of the forest are *Sonneratia apetala*, *Avicennia officinalis*, *Bruguiera gymnorhiza*, *Acanthus ilicifolius*, etc.

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)

It is an important fish breeding ground and wildlife habitat. The NP is a home of about 25000 spotted deer, the key wildlife species. The common mammals are flying fox, jungle cat, jackal, mongoose, squirrel etc. Reptiles include three monitor species, *Varanus bengalensis*, *V. flavescens*, *V. salvator*, as well as several species of snakes, turtles and tortoises

The most important significance of the NP is that it is one of the key shorebird sites in the East-Asia Australasian Flyways. Tens of thousands migratory shore birds visit the islands like waders, gulls, terns, egrets, ducks and geese. Some rare species like Spotted Greenshank, Spotted Redshank, Spoon-billed Sandpiper, Indian Skimmer, Asian Dowitcher and large number of Black-tailed Godwit. Other threatened species include Lesser Adjutant, Greater Spotted Eagle, Lesser Spotted Eagle and Imperial Eagle.

21. Social and cultural values:

a) Describe if the site has any general social 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:

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?

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:

The socio-economic setting of the proposed area is profoundly influenced by the dynamic physical environment in which communities are living. The tides, flooding, storms and processes of erosion and accretion are major parameters of existence.

Among 15, 000 people of Nijhum Dweep neighboring area, about 70% are engaged in fishing and 30% are engaged in agriculture and livestock. The majority of the landless populations are engaged seasonally as farm laborers, earth-cutting workers or in fishing activities. Boating is an important local occupation. Women of that are mainly engaged in domestic and other activities around the homestead.

22. Land tenure/ownership:

a) within the Flyway Network site:

Within Nijhum Dweep National Park, ownership is lying with the Bangladesh Forest Department.

b) in the surrounding area:

Ownership is lying with the Bangladesh Forest Department & Deputy Commissioner of the District.

23. Current land (including water) use:

a) within the Flyway Network site:

The land uses of the proposed site include

Mangrove plantation: 6900.0 ha.

Pasture land for deer: 800.0 ha.

Human habitation and agricultural land: 1620.0 ha.

Water body, submerged chars and others: 7032.0 ha.

b) in the surroundings/catchment:

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:

Frequent river bank erosion, tidal surge, cyclones, cattle grazing, encroachment etc. are the main factors adversely affecting the site's ecological character, including changes in land (including water) use and development projects.

b) in the surrounding area:

Similar affecting factors are also available in the surrounding area.

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.

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

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

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

d) Describe any other current management practices:

26. Conservation measures proposed but not yet implemented:

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

27. Current scientific research and facilities:

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

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.

Educational Institutions like Chittagong University, Dhaka University, Zahangir Nagar University, Noakhali Science and Technology University etc. are now focusing on study of the ecology and biodiversity of the Nijhum Dweep. Students of these universities are conducting researches as part of their thesis work. Different Non-government organizations like Araynnak Foundation, USAID are also showing interest on the conservation and management of the protected area. Different facilities for visitors such as visitors centre, observation tower, foot trails etc. are proposed to develop. A project named "Conservation and restoration of bio-diversity of Nijhum Dweep National Park through Eco-tourism Development" has been submitted to the Ministry for development of ecotourism facilities. Many short programs has been telecast in TV channels and the potentials of the bio-diversity, natural scenery, spotted deer etc. has been regularly featured on the daily newspapers.

29. Current recreation and tourism:

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

Nijhum Dweep has a good potential for eco-tourism development due to its isolated location and wilderness nature. At present, about 10,000 visitors and nature lovers visit the area especially in winter.

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**