Ganguirar Char

Bangladesh

EAAF NETWORK SITE CODE FOR OFFICE USE ONLY:

E	A	A	F	1	4	1

Site Information Sheet on

East Asian-AustralasianFlyway 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 inBeijing, China 13-14 November 2007 - Report (Minutes) Agenda Item 3.13

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2. Date this sheet was completed*:

DD/MM/YYYY

25/09/2018

3. Country *:

Bangladesh (The Peoples Republic of Bangladesh)

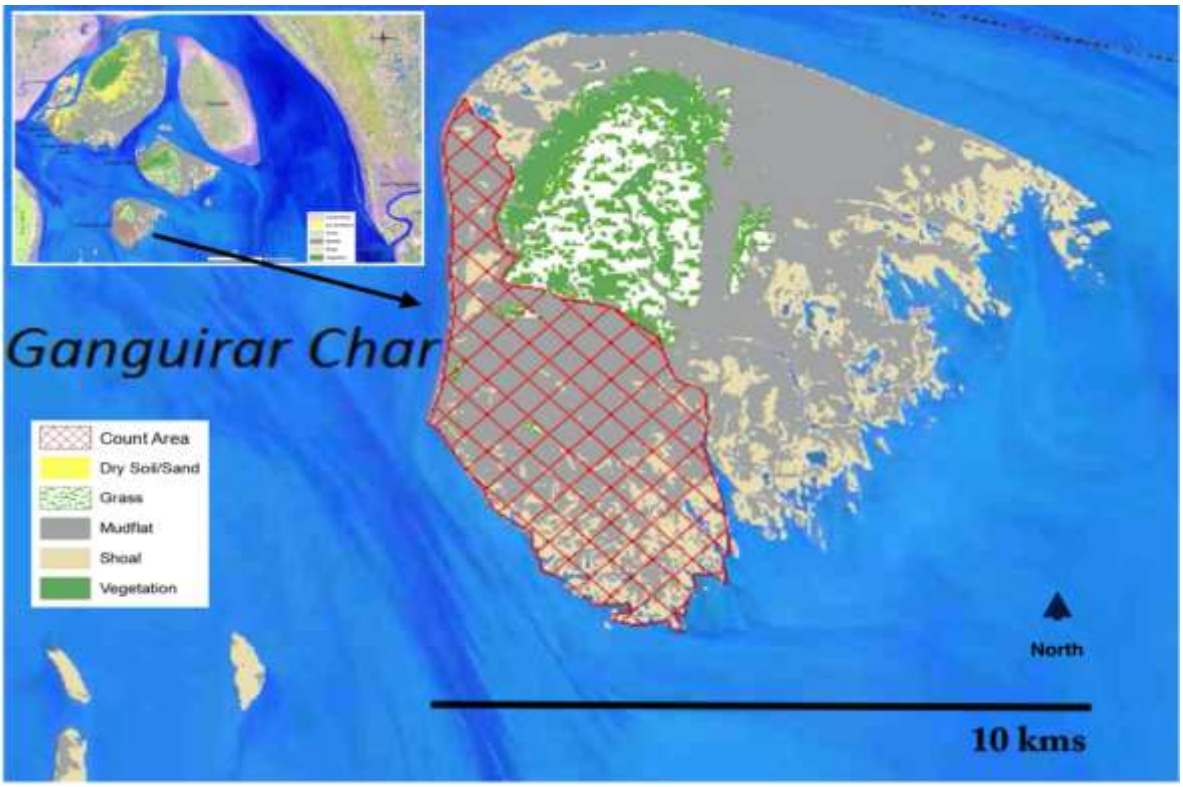
4. Name of the Flyway Network site*:

Accepted English transcription of the Site's name.

Ganguirar Char

5. Map of site *:

The most up-to-date available and suitable map of the wetland should also 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.

22°15'56.54"N
91°20'13.78"E

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

The terrain of the Ganguirar Char has a gentle slope towards the sea with less than 1.0 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.

6,971 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.

Ganguirar Char is the most important island in eastern Meghan Estuary for many endangered migratory species, located on the east of Hatia upzila (sub-district), Noakhali and west of Sandwip upzila, Chattagram of Bangladesh. The mudflats of Ganguirar Char supports several globally threatened waterbird species such as Spoon-billed Sandpiper, Great Knot, Spotted Greenshank, etc.

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.

A2

The mudflats of Gangauirar Char is an important wetland site for wintering migratory including several globally threatened waterbird species such as the Spoon-billed Sandpiper (CR), Spotted (Nordmann's) Greenshank (EN), Great Knot (EN) etc. In 2016, 48 Spoon-billed Sandpiper, 2 Spotted (Nordmann's) Greenshank and 40 Great Knot have been recorded (Chowdhury *et al.* 2017).

A5

Totals of 27,791 shorebirds of 26 species and 2,865 other waterbirds of 16 species were recorded between 5 and13 December 2015 from Gangauirar Char and nearby sites. In a repeat survey of the same sites conducted between 2 and 9 February 2017 and counted 19,717 shorebirds of 25 species and 1,807 other waterbirds of 15 species. The sum of the peak counts for each shorebird species across the two surveys was 25,993 (Spoon-billed Sandpiper Task Force, EAAFP & Bangladesh Spoon-billed Sandpiper Conservation Project Report, 2018).

A6

For supporting 1% of the flyway population of one species or subspecies of waterbird, these species include Kentish Plover *Charadrius alexandrinus*, Lesser Sand Plover *Charadrius mongolus*, Greater Sand Plover *Charadrius leschenaultii*, Broad-billed Sandpiper *Calidris falcinellus*, Spoon-billed Sandpiper and Terek Sandpiper *Xenus cinereus* (Spoon-billed Sandpiper Task Force, EAAFP & Bangladesh Spoon-billed Sandpiper Conservation Project Report, 2018).

Species	EAAF population	1% of EAAF population	Peak count (date)	Source
Kentish Plover	100,000	1,000	1,120 (2015)	Chowdhury *et al*. 2017
Lesser Sand Plover	26,000	260	13,950 (2015)	”
Greater Sand Plover	79,000	790	3,260 (2015)	”
Broad billed Sandpiper	25,000	250	1,168 (2016)	”
Terek Sandpiper	50,000	500	650 (2016)	”
Spoon-billed Sandpipers	<1,000	10	48 (2016)	”

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 (Ganguirar Char) falls under the following categories:
I- Intertidal forested wetlands
A- Permanent Shallow Marine waters
G- Intertidal mud, sand or salt-flats
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, Forests and Climate Change, Sectoral Jurisdiction- Bangladesh Forest Department

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.

Bangladesh Forest Department

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.

1. Chowdhury, S. U., Foysal, M., Diyan, M. A. A., & Ahmed, S. (2017). Discovery of an important wintering site of theCritically Endangered Spoon-billed Sandpiper *Calidri spygmaea* in the Meghna Estuary, Bangladesh. BirdConservation International, 1-12.
2. "Proposal to establish Ganguirar Char Bird Sanctuary" Spoon billed Sandpiper Task Force, EAAFP & Bangladesh Spoon billed Sandpiper Conservation Project Report, 2018.

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.

Ganguirar Char is the most important island in eastern Meghan Estuary, located on the east of Hatia upzila and west of Sandwip upzila.

Forest Type: Mangroves in early succession stage
District: Noakhali; Upozila: Hatia
Bio-Ecological Zone: Offshore Island
Physiography: Young Meghna Estuarine FloodPlains
Habitat typesfor birds: Mudflat & hightide roost; Sand-mud mixed

The sediments are then reworked and redistributed particularly by wave and tide to form sand bars and lagoons and subsequently settled. 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 Ganguirar Char 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 and brackish water. Land area of the coastal zone has mostly mudflat &few 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 donot come under sec no 14)

In few areas of the Ganguirar Char, man-made coastal mangrove was created by Forest Department. 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 donot come under sec no 14)

It is an important fish breeding ground and wildlife habitat. 51 waterbird species has been recorded so far. The recent survey was literally focused on waterbird and shorebirds. Globally vulnerable Irrawaddy Dolphin *Orcaella brevirostris*was also recorded during the survey. Important other records of globally near-threatened waterbirds and shorebirds are: Black-tailed Godwit *Limosa limosa,* Bar-tailed Godwit *Limosa lapponica,* Eurasian Curlew *Numenius arquata,* Red Knot *Calidris canutus,* Red-necked Stint *Calidris ruficollis,* Curlew Sandpiper *Calidris ferruginea,* Black-headed Ibis *Threskiornis melanocephalusetc* (Chowdhury *et al.* 2017).

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:

The island has no human settlement yet and also minimal disturbance. It is an important fish breeding ground. Adjacent fishermen use the place on temporal visit during their fishing.

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)

Not Applicable

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:

Bangladesh Forest Department

b) In the surrounding area:

Bangladesh Forest Department & Deputy Commissioner of the District.

23. Current land (including water) use:

a) Within the Flyway Network site:

Total area of the proposed FNS is 6,971 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, etc. are the main factors adversely affecting the site's ecological character, including changes in land (including water) use.

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.

Currently Gangauirar Char is not recognized under any conservation management scheme

(International Resources Group 2012, Chowdhury *et al.* 2017). Gangauirar Char may coincide with the boundary of one of the six Hilsa shad *Tenulosa ilisha* sanctuaries of the country (Islam *et al.* 2014)

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?

No management plan yet

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

N/A

d) Describe any other current management practices:

No management practice/guideline yet. Forest staff monitors the site.

26. Conservation measures proposed but not yet implemented:

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

Spoon-billed Sandpiper Task Force, EAAFP & Bangladesh Spoon-billed Sandpiper Conservation Project Report of "Proposal to establish Ganguirar Char Bird Sanctuary" 2018 hasrecommend to the Bangladesh Forest Department, Ganguirar Char to be established as a Bird Sanctuary and FNS.

27. Current scientific research and facilities:

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

Spoon-billed Sandpiper Task Force, EAAFP & Bangladesh Spoon-billed Sandpiper Conservation Project is monitoring the population of migratory and waterbirds along with other marine species.

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.

N/A

29. Current recreation and tourism:

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

No current recreation and tourism

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 (Not Applicable)			
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 (Not Applicable)			
fire and fire suppression	☐	☐	☐

dams and water management/use	☐	☐	☐
other ecosystem modifications	☐	☐	☐
Invasive and other problematic species and genes (Not Applicable)			
invasive non-native/alien species	☐	☐	☐
problematic native species	☐	☐	☐
introduced genetic material	☐	☐	☐
Pollution (Not Applicable)			
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.

No major threat was recorded at Ganguirar Char, although small scale fishing was observed. Bhashan Char/Thengar Char/Jailar Char has been selected to relocate the Rohingyas, which is located only 5km northeast of Ganguirar Char. This intervention in the area is likely to present severe threat to the local biodiversity including fisheries, vegetation, birds and marine mammals when the Rohingyas start collecting natural resources from this region for their livelihood (Chowdhury *et al.* 2017). Therefore, it is critically important to protect the surrounding areas for biodiversity and local livelihood.

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 recognized 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 NaturalMonument 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.