

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.

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

Full name: Gombobaatar Sundev and Mrs Ch. Erdenetuya

EAAF SITE CODE FOR OFFICE USE ONLY:

Institution/agency: Mongolian Ornithological Society and Ugii Lake Information Centre

Address: Astra Building -1148, Sukhbaatar District, Ulaanbaatar, Mongolia and Ugii nuur sum, Arkhangai province

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Telephone: 976-99180148; 976-77460148; 976-99143518

Fax numbers:

E-mail address: info@mos.mn; mongolianbirds@mail.com; nawawen@gmail.com

2. Date this sheet was completed *:

DD/MM/YYYY

04/02/2016

3. Country *:

Mongolia

4. Name of the Flyway Network site *:

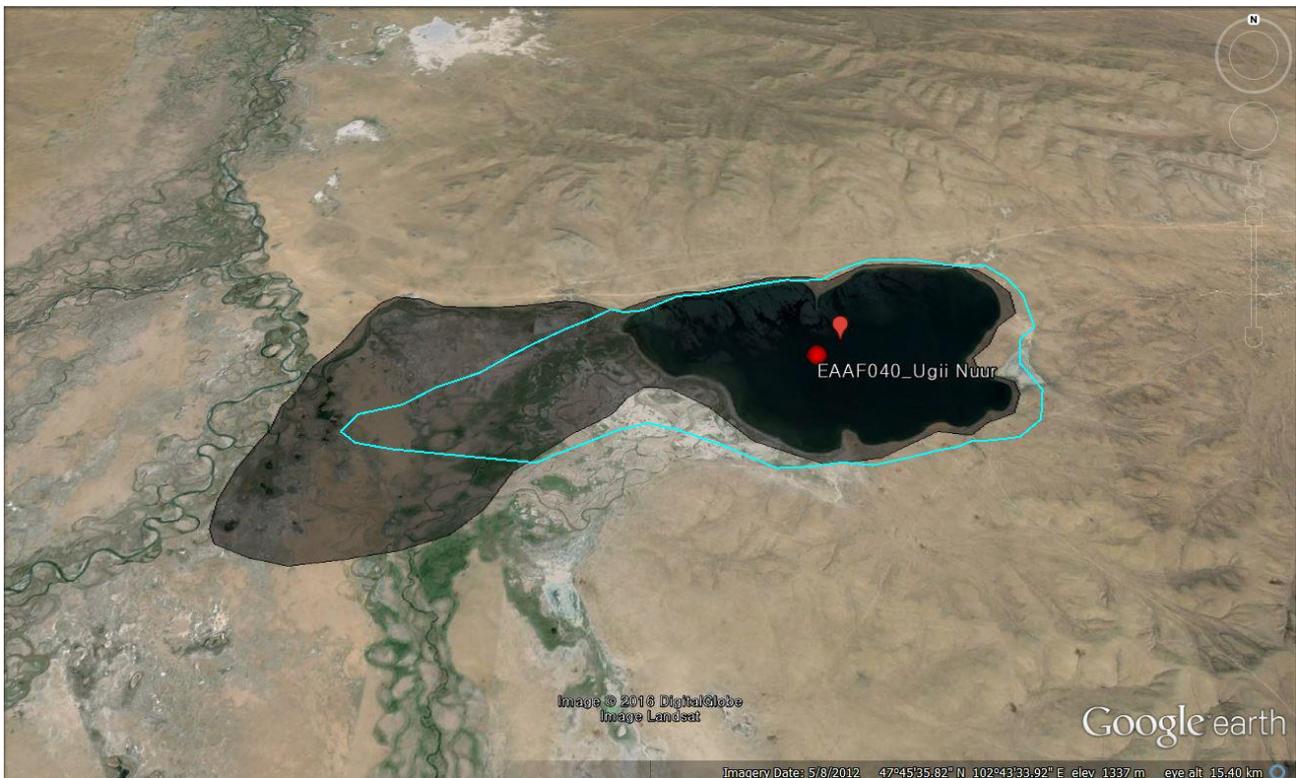
Accepted English transcription of the Site's name.

Ugii Lake and its Wetlands

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](#).

[Ugii Lake](#) (KML file)



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.

Ugii Lake: 47°46'19.5"N 102°46'23.9"E

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

Ugii Lake: 1,337 m.

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.

Ugii Lake and its Wetlands: 59.2 km or 59,200 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.

Ugii Lake is located in the valley of the Orkhon River, to the north of the main Khangai range in the Arctic Ocean Drainage Basin. It is a mesotropical freshwater lake with an extensive alluvial area of grassland, River channels, pools and marshes at the western end. The maximum depth of the lake is 16 m, but about 40% of the lake is less than 3 m deep, and 50% supports macrophyte growth. The surface water temperature in summer reaches 18°C. The lake is a very important breeding, staging and moulting area for waterfowl, particularly Anatidae including Swan Goose, Bar-headed Goose, Common Pochard.

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.

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: The Ugii Lake supports globally and regionally threatened and near threatened waterbird species such as Swan Goose, Relict Gull, White-naped, Siberian and Hooded Cranes. Other important bird species are Great Bustard and Pallas's Fish eagle (Gombobaatar et al. 2011).

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

That is:

i. The wetland supports 0.25% of global individuals in a population of Great Cormorant (0.4%, 500 individuals) and Ruddy Shelduck (0.4%, 241 individuals) in single season (Batchuluun et al. 2012).

ii. During the migration season, it supports more than 6,000 waterbirds (Tsegmid and Uuganbayar, 2006).

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.

Inland wetlands:

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

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

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.

12. Jurisdiction *:

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

Orkhon River Administration, Ugii Nuur Sum of Arkhangai Province and Ministry of Environment, Green Development and Tourism

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.

Local Governor, Ugii Nuur sum, Arkhangai Province

In collaboration with

Mongolian Ornithological Society and Ugii Nuur Information Centre

Dr. Sundev Gombobaatar and Mrs Ch. Erdenetuya

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.

Batchuluun, D., Tseveenmyadag, N., Bodisaikhan, Kh. and Dashnyam, Sh. 2012. *Report on Avian influenza surveillance study in 2009-2011*. Ulaanbaatar, Mongolia p.148-150. (in Mongolian and English)

Biodiversity conservation action plan for Mongolia. 1996. The Ministry for Nature and Environment Ulaanbaatar, Mongolia.

Directory of Asian Wetlands, 1989. IUCN, The World Convention Union .

Gombobaatar, S. (compiler), Brown, H.J., Sumiya, D., Tseveenmyadag, N., Boldbaatar, Sh., Baillie, J.E.M., Batbayar, G., Monks, E.M., Stubbe, M. (editors). 2011. *Summary Conservation Action Plan for Mongolian Birds. Regional Red List Series* Vol. 8. Zoological Society of London, Mongolian Ornithological Society and National University of Mongolia. 847-856 pp. (in English)

Mongolian Red Book. 1997. Ministry of Nature. Ulaanbaatar. Mongolia.

Mongolia's Wild Heritage. 1996. Mongolia Ministry for nature and Environment, UNDP\GIF. WWF, Avery Press in Hong Kong

National Atlas of Mongolia. 1990. Mongolian Academy of Science and Russian Academy of Science. Ulaanbaatar and Moscow.

Simon Delany. 2006. *Waterbird Population Estimates*, Fourth edition. Wetland International.

Tsegmid, N. and Uuganbayar, Ch. 2006. Birds. *Nature guide book of Ugi lake area*. Ulaanbaatar. Mongolia. P.1-76.

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.

This site contains old Orkhon River, open wide valley of lake depression with abundant Chee grass, mountain steppe with Caragana vegetation and wet meadows with short vegetation. Water surface area is 25.1 km². The lake width is 3.0 km reaching 5.9 km at its widest point, average depth 5.3 m (max 15.9 m), volume of water 0.1706 km³. Soil type differs in various habitats. However, river and lake meadow dark soil, meadow saline soil with carbonaceous formed for many years. The area has continental climate with dry cold winters and warm summers. Mean air temperatures vary from -37°C in January to +37°C in July. The warm period, when the temperature is above zero, lasts for 150 to 160 days. Annual precipitation varies from 200-250 mm, of which 80% fall between July and end of August.

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 lake is surrounded by low elevated mountains with Caragana bushes. In south-western part of the lake continues wide open meadow along Old Orkhon River and patched small pools and ponds edged by reed beds. Climate type is the extreme continental. Soil is a variable from sandy to mountain dark brown. Salty grey clay type soil exist along shore lines.

17. Hydrological values:

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

The lake itself is a shallow and mesotrophic with an extensive alluvial area of grassland and river channels. Isolated pools, ponds and marshes in the SW of the lake are permanent. Small rivers flow through this area into the lake. The maximum depth of the lake is 16 m, but about 40% of the lake is less than 3 m deep. The surface water temperature in summer reaches 18°C the conductivity is approximately 280 cm. Old Orkhon River feeds the lake therefore water level of the lake very dependent on the water level of the river.

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.

Dominating plants are Caragana bush *Caragana spp.* in the surrounding mountains and Chee grass *Stipa splendens* in the valley in the north of the lake where lies in the mountain steppe zone. In the east and south of the lake, there are wide open shores with gravel and salty mud. The area supports a large river valley and a number of small rivers, ponds, and swampy areas in the SW of the lake.

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 majority of the lake shores of the lake are erosion gravel surface and macrophytes live from one to five metres from shore line, namely *Potamogeton spp.*, *Mvriophyllum spicatum* and *Ceratophyllum demersum*. The dominant emergent in these marshes at the SW and lake is *Schoenoplectus (Scirpus) spp.* and reeds (*Phragmites spp.*) in small areas. Other aquatic plants include Longroot Smartweed (*Polygonum amphibium*), *Potamogeton perblytus*. Whitestem Pondweed (*Potamogeton praelongus*), *Hippuris vilgaris*, and *Batrachium eradatum*. The phytoplankton is composed chiefly by diatoms. In south-western part of the lake continues wide open meadow along Old Orkhon River and patched small pools and ponds edged by reed beds. Dominating plants are Caragana bush in surrounding mountains and Chee grass in the valley in the north of the lake where lies in the mountain steppe zone.

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 benthic fauna is diverse. The zooplankton is dominated by copepods and cladocerans. The fish fauna is dominated by typically northern Eurasian species that comprise cyprinids such as pike and perch. The main species are Pike (*Esox lucius*), Perch (*Perca fluviatilis*), Common Roach (*Rutilus rutilus lacustris*), Siberian Dace (*Leuciscus leuciscus baicalensis*), Eurasian Minnow (*Phoxinus phoxinus*), Carp (*Carassius auratus gibelio*) and Burbot (*Lota lota*). Rare species include Lenok (*Branchynwstax lenok*) and Arctic Grayling (*Thymallus arcticus*). The lake is a very significant breeding and stop over site of migratory waterbirds, particularly Anatidae.

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 area is important to develop a community based birding tourism in the wetland due to its location in a tourism development area. Animal husbandry is vital for the people living around the wetlands. There is small-scale fishery.

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)

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:

State owned but managed by local government.

b) In the surrounding area:

State owned but managed by local government.

There are 4 major tourist camps, Ugii Lake information center and 3 eco-ger camps in the area

23. Current land (including water) use:

a) Within the Flyway Network site:

State owned but used by local government.

b) In the surroundings/catchment:

State owned but used by local government.

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:

- Livestock overgrazing and habitat degradation
- Bad managed tourism mostly disturbance and waste
- Drought –Orkhon river water level has been going down year by year.
- Engine boat during the breeding season of breeding species
- Disturbance from local tourists from mid-July to late August
- Waste pollution from local tourists

b) In the surrounding area:

- Overgrazing and degradation due them to dry summers.
- Man-made steppe fire during the dry period
- Negative impacts from tourism

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.

It was registered to Ramsar's Convention in 1998 and designated a local protected area in 2006.

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?:

Yes.

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

No.

d) Describe any other current management practices:

1. Non-systematic research
- 2 & 3. Education and public awareness

26. Conservation measures proposed but not yet implemented:

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

Ugii Lake information centre has been planning to establish a bird watching tower and systematic survey on breeding and migratory birds

27. Current scientific research and facilities:

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

In 2005-2008, JICA implemented joint and complex studies of the lake ecosystem covering all plants and animals. In the frame work of the monitoring, Ugii Lake Information Centre was established by the JICA as Ramsar visit site.

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 Ugii Lake Information Centre is one of the active visitor centre. There is a small observation centre near information centre. The JICA team published a small book, a "Guide Book to Ugii Lake". Totalling 1-2 small leaflets were distributed from the centre and tourist companies to local people last years.

29. Current recreation and tourism:

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

Local and overseas companies bring general tourists and birding clients to the lake. Also tourist companies organize very limited kayaking, fishing and wildlife watching safaris. The lake is crowded with local tourists from 15 July to end of August. Number of visitors has been increasing for last few year. Due to this disturbance, the number of breeding birds has been decreasing.

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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
commercial and industrial areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
tourism and recreation areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Agriculture and aquaculture			

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

Pollution

household sewage and urban waste water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
industrial and military effluents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
agricultural and forestry effluents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
garbage and solid waste	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
air-borne pollutants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
excess energy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Geological events

volcanoes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
earthquakes/tsunamis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
avalanches/landslides	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Climate change and severe weather

habitat shifting and alteration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
droughts	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
temperature extremes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
storms and flooding	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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 character 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

Information Sheet on EAA Flyway Network Sites

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