

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.

1. Date this sheet was completed/updated:

05/23/2001

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Designation date

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Site Reference Number

2. Country:

The People's Republic of China

3. Name of wetland:

Dalai Lake National Nature Reserve, Inner Mongolia

4. Geographical coordinates: 48°33'N, 117°30'E

5. Elevation: (average and/or max. & min.) 545m-784m **6. Area:** 740,000ha

7. Overview: (general summary, in two or three sentences, of the wetland's principal characteristics)

This site is a part of Dalai Lake Water System. It's a complex of lakes, rivers, marshes, shrubs, grasslands and reed beds. It has typical characteristics of wetlands in arid steppes and still retains good primitiveness and naturalness. Major land uses of the site include livestock grazing, fishery, and reed cutting. In addition, it supplies water to neighboring cities, provides habitats for a wide variety of birds and has tourism values.

8. Wetland Type (please circle the applicable codes for wetland types; in the present document, the "Ramsar Classification System for Wetland Type" is found on page 9)

marine-coastal: A • B • C • D • E • F • G • H • I • J • K •
Zk(a)

inland: L • M • N • O • P • Q • R • Sp • Ss • Tp
Ts • U • Va • Vt • W • Xf • Xp • Y • Zg • Zk(b)

human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

Please now rank these wetland types by listing them from the most to the least dominant:

O M Tp W R N Q P

9. Ramsar Criteria: (please circle the applicable Criteria; the *Criteria for Identifying Wetlands of International Importance* are reprinted beginning on page 11 of this document.)

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8

Please specify the most significant criterion applicable to the site: 5

10. Map of site included? Please tick yes

(Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map traits).

11. Name and address of the compiler of this form:

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Please provide additional information on each of the following categories by attaching extra pages (please limit extra pages to no more than 10):

12. Justification of the criteria selected under point 9, on previous page. (Please refer to the *Criteria for Identifying Wetlands of International Importance* appended to this document)

Criterion 5: More than 20,000 Common Cormorant *Phalacrocorax carbo* were recorded in the Wulannur area in spring 2000. Over 1,000 individuals of Anatidae and shorebirds were counted.

Criterion 2: National First Class Protected Animals i.e. *Grus leucogeranus*(E) , *Grus japonensis*(E), *Grus monacha*(E) , *Aquila chrysaetos daphanea*, *Haliaeetus leucoryphus*□*Larus relictus*(V), *Otis tarda dybowskii*□*Ciconia nigra*(E) and *Aquila heliaca* □and 35 National Second-class Protected Animals. Waterbirds especially Anatidae and shorebirds constitute a major part of the 284 bird species. Anatidae and shorebird species have large numbers of individuals and more than 100,000 birds of these two taxa stage or breed here. The species e.g. *Anthropoides virgo*(I), *Numenius madagascariensis* and *Numenius minutus* are also found in the Nature Reserve.

Criterion 6: A total of 3,890 lapwings *Vanellus vanellus* were counted in this nature reserve in September 2000, which accounted for 3.89% of the total number of this species in the world. Total 1,018 Swan Geoses *Anser cygnoides* were counted in April 2001, accounting for 2.03% of its global individuals. In addition, a total of 127 White Spoonbills *Platalea leucorodia*(V) were recorded in September 2000, accounting for 1.27% of its global individuals.

Criterion 7: Dalai Lake and its neighboring water areas support a total of 30 fish species and 1 fish subspecies, falling under 6 families and 3 orders. Fish fauna of Dalai Lake has a complicated composition. Species of both the Siberia area and Northeast China co-exist here. Its cold-water species can be categorized into Northern Plain Complex, Northern Mountain Complex and Arctic Complex. *Culter erythropterus* and *Erythroculter mongolicus* dominant species in view of their catches.

Criterion 8: The major spawning areas of *Cyprinus carpio* and *Carassius auratus* in Dalai Lake are Wuerxun River, Kelulun River and the Galadabaixin area. During the spawning time, most of the *Cyprinus carpio* and *Carassius auratus* go upstream the rivers and a small part of them spawn in marshlands of Galadabaixin. With regard to *Cyprinus carpio* and *Carassius auratus* in Beir Lake, most of them go upstream Halaha River to spawn and others go downstream to Wulannur Lake and Wuerxun River to spawn.

(According to *China National Wetlands Conservation Action Plan and Science Report of the NR*)

13. General location: (include the nearest large town and its administrative region)

This site is located in west Hulunbeir Prefecture. It stretches across three administrative regions i.e. Xinbarhuzuoqi County (with a population of 40,000), Xinbarhuyouqi County (with a population of 32,000) and Manzhouli City (with a population of 157,000). It is 40 kilometers north to the city center of Manzhouli and borders Republic of Mongolia in the south.

14. Physical features: (e.g., geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate)

- Geology and geomorphology: Dalai Lake is a part of Hulunbeir Plateau. From a tectonic view, it is located in the Inland China Subsidence Zone of East Asia Giant Structural System. Geomorphologic types include lake bed, hills, lacustrine plains, alluvial plains, sand dunes, riverine marshes and plateaus.
- Origins: Natural. Climatic and geological conditions have kept changing since the Quaternary Period. Accordingly, the water level of the Dalai Lake fluctuated from time to time. Finally, the Dalai Lake Water System was formed which is composed of the Dalai Lake and adjacent Kelulun River, Wuerxun River, Halaha River and Beir Lake.
- Hydrology: The Dalai Lake Water System has a total 2,379.4 km rivers and 37,214 km² catchment area (domestic part). Water level of Dalai Lake keeps stable from early November to next April and then gradually rises from early spring.
- Soil type: The site has a thin soil layer and a rough land surface. Chestnut Soil is the regional soil type. Meadow Soil and Marsh Soil are major soil types in the Nature Reserve.
- Water quality: The water quality was analyzed in July 2000 and average values of selected indicators are: pH 9.08, water temperature 23.5 °C, suspended substance 19.4 mg/l and transparency 38cm.
- Water depth: The average water depth of Dalai Lake is 5.7 meters. The water depth almost remains stable.
- Climate: This site has a mid-temperate and semi-arid continental climate. The mean annual temperature varies between -1.3 °C and 0.4 °C. The minimum and maximum temperatures are -42.7 °C and 40.1 °C respectively.

15. Hydrological values: (groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.)

The Dalai Lake region is the only lower land of Hulunbeir Plateau and therefore has a great importance in flood storage and sediment retention.

The water storage of the Dalai Lake is 13.86 billion cubic meters. It has a high osmotic pressure and therefore is important for groundwater recharge.

Larges areas of reeds and other hydrophytes grow in the water edge of the Dalai Lake. Therefore the Lake has a strong capability of biodegradation and is important for maintaining water quality.

16. Ecological features: (main habitats and vegetation types)

Major habitats include:

- Typical grasslands;
- Lakes;
- Rivers;
- Marshes dominated by emergent plants: Constructive species are *Phragmites* and *Typha*.
- Marshes dominated by submergent plants: Constructive species is *Potamogeton*.
- Shrub marshes: There exist extensive willow *Salix* shrubs.

17. Noteworthy flora: (indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc.)

- Marsh vegetations are most important in the Dalai Lake. They are distributed in river channels and seasonally or permanently inundated areas. Dominant species are

Phragmites, *Carex*, *Calamagrostis angustifolia*, *Scirpus fluviatilis* and willow shrubs. They provide breeding habitats for waterbirds. Parent fish in the Dalai Lake and Beir Lake migrate to shallow water areas with marsh vegetations to spawn. Therefore marsh vegetations are important breeding areas for birds and important spawning areas for fish. Reed marshes mainly exist in two areas: shallow water area in southwest Dalai Lake and the Wulannur Lake. Galadabaixin Core Area and Wulannur Core Area of the Nature Reserve have extensive reed beds. Willow shrubs mainly exist in the river banks. Xu Zhanjiang. *Annals of the Hulun Lake*. Jilin Literature and History Press. 1989
An Integrated Survey Report of the Dalai Lake National Nature Reserve. 1987
A Bird Survey Report of the Dalai Lake National Nature Reserve. 1995-2000
The Dalai Lake National Nature Reserve Master Plan: 2001-2010. 2000

18. Noteworthy fauna: (indicating, e.g., which species are unique, rare, endangered, abundant or biogeographically important; include count data, etc.)

The Dalai Lake wetland is located in a major migratory route of waterbirds in eastern part of China. It is also a staging site in the East Asian-Australasian Shorebird Flyway. Avifauna falls under Eastern Grassland Sub-Province, Mongolia-Xinjiang Province, Palaearctic Realm. Summering birds and resident birds are dominant and account for 80% of the total species. A total of 284 bird species have been recorded by the Nature Reserve or literatures, including 9 National First Class Protected Animals i.e. *Grus leucogeranus*(E) , *Grus japonensis*(E), *Grus monacha*(E) , *Aquila chrysaetos daphanea*, *Haliaeetus leucoryphus*□*Larus relictus*(V), *Otis tarda dybowskii*□*Ciconia nigra*(E) and *Aquila heliaca* □and 35 National Second-class Protected Animals. Waterbirds especially Anatidae and shorebirds constitute a major part of the 284 bird species. Anatidae and shorebird species have large numbers of individuals and more than 100,000 birds of these two taxa stage or breed here. The species e.g. *Anthropoides virgo*(I), *Numenius madagascariensis* and *Numenius minutus* are also found in the Nature Reserve. In addition, *Circus aeruginosus* is also a national endangered species and has a large number in the Nature Reserve (one time ten individuals were observed at most).

The Dalai Lake is one of a small number of important breeding areas for *Cygnus olor*(V) and *Anser cygnoides* in China

Xu Zhanjiang. *Annals of the Hulun Lake*. Jilin Literature and History Press. 1989
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19. Social and cultural values: (e.g., fisheries production, forestry, religious importance, archaeological site, etc.)

Social values

Tourism: Tourists can enjoy traditional food, sightseeing, bird watching, boating and Mongolian customs and cultures.

Education: The Dalai Lake has become an important patriotism and environmental protection education base for its integrated ecosystem and rich biodiversity.

Scientific research: The Dalai Lake can be used as a major base for studying grassland and wetland ecosystems and their fauna and flora.

Livestock grazing: The natural grasslands surrounding the Dalai Lake support a total of 2 million livestock.

Water supply: The Dalai Lake is a major water source for local people and livestock of the surrounding communities.

Fishery: The Dalai Lake can produce more than 10,000 ton economic fish per year.

Cultural values

Historic Significance: The Dalai Lake and its surrounding grasslands are cradles of many herder rations in northern China. It provided stages for Mongolian People, Qidan People and Nuzhen People in the past.

Tourism, livestock grazing and fishery activities are closely related to maintenance of natural process and ecological characteristics of wetlands in the Dalai Lake region.

Potential values

The long-term existence of the Dalai Lake is critical for maintaining regional climate, increasing air humidity, increasing rainfall, maintaining groundwater level and achieving sustainable use of Hulunbeir Grassland.

20. Land tenure/ownership of: (a) site (b) surrounding area

The water areas of the Dalai Lake and Beir Lake are owned by the state. However, the Dalai Lake Fishing Farm has the tenure to use the lake for fishing activities. The surrounding grasslands are under collective ownership and local herdsmen have tenure to use the lands. The Nature Reserve has not yet got land tenure.

21. Current land use: (a) site (b) surroundings/catchment

1. Within wetlands: fishery and reed cutting
 2. Outside wetlands: water supply for domestic and industrial uses, livestock grazing
 3. Current human activities have not affected water quality or reduced wetland areas.
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22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects: (a) at the site (b) around the site **At the site:**

The individual sizes of fish catches are becoming smaller and the ages of them are becoming younger because of over-fishing. This may result in exhaustion of fishery resources.

Around the site:

Overgrazing has resulted in desertification in the surrounding area of the Dalai Lake. It will be a potential threat to wetland ecosystem from a long-term view.

Large amount of willow branches has been cut to establish livestock sheds. This can result in erosion of river banks and siltation of river channels.

Oil reservation has been found in the surrounding area of the Nature Reserve. Possible oil extraction may cause water pollution and consume large amount of freshwater.

23. Conservation measures taken: (national category and legal status of protected areas - including any boundary changes which have been made; management practices; whether an officially approved management plan exists and whether it has been implemented)

- Approved by the State Council, the Dalai Lake National Nature Reserve was established in October 1992. It has a total area of 7,400 km² with its boundary demarcated. Two management stations have been established in its two core areas for daily patrol and management.
 - The current Dalai Lake National Nature Reserve Management Bureau is responsible for strict management and protection of the Nature Reserve. The specific management regulations include: strict prohibition of agricultural reclamation, prohibition of uncontrolled fishing, prohibition of overgrazing, restriction of sand and stone extraction and strict prohibition of hunting.
 - The Nature Reserve Management Bureau has signed agreements with local governments and communities on joint conservation of the Nature Reserve.
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24. Conservation measures proposed but not yet implemented: (e.g., management plan in preparation; officially proposed as a protected area, etc.)

- A Management Plan for 2000-2004 is under preparation;
 - “The Dalai Lake National Nature Reserve Management Provisional Regulations” has been submitted to the People’s Congress of Inner Mongolia Autonomous Region, but has not been approved yet.
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25. Current scientific research and facilities: (e.g., details of current projects; existence of field station, etc.)

- The Nature Reserve Management Bureau has established its management stations in Galadabaixin Core Area, Wulannur Core Area and Chengjisihan Shuanmazhuang Tourism Area. Staff of the Nature Reserve has carried out observations of some rare and endangered bird species e.g. *Platalea leucorodia*, *Otis tarda dybowskii* and *Cygnus olor*.
 - Telescopes and cameras are main scientific research equipment.
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26. Current conservation education: (e.g., visitors centre, hides, info booklet, facilities for school visits, etc.)

- The Nature Reserve Management Bureau established its management stations in Wulannur and Galadabaixin Core Areas in 1996 with good infrastructure facilities. A management station was established in Chengjisihan Shuanmazhuang Tourism Area in 1998 and efforts have been made to raise the environmental protection awareness of tourists.
 - The Nature Reserve Management Bureau has produced a series of brochures to introduce the Nature Reserve and its key protected targets.
 - The Nature Reserve Management Bureau has established a branch office in Xinbarerhuyouqi County. This branch office has set up a specimen exhibition room and makes regular lectures on environmental protection for preliminary and middle schools.
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27. Current recreation and tourism: (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

- The Dalai Lake has rich tourism resources. Presently the tourism activities are concentrated in northern side of the lake and Xiaohekou Area. The Dalai Lake Hotel is the principal tourism facility. Tourism activities characterized by traditional food, angling and boating have been carried out for many years.
 - The Nature Reserve has established Xiaohekou Tourism Area Management Station and Chengjisihan Shuanmazhuang Tourism Area Management Station, which are responsible for management and supervision of tourism activities in their jurisdictions.
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28. Jurisdiction: (territorial, e.g. state/region, and functional, e.g. Dept of Agriculture/Dept. of Environment, etc.)

- This region is under jurisdiction of Xinbarhuzuoqi County Government, Xinbarhuyouqi County Government and Manzhouli Municipal Government.
 - Some departments of Hulunbeir Prefecture Government e.g. the Environmental Protection Office, Forestry Bureau, Agriculture and Husbandry Bureau and Land Use Planning Bureau have responsibilities to protect the environment of the Nature Reserve.
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29. Management authority: (name and address of local body directly responsible for managing the wetland)

The Management Bureau of Dalai Lake National Nature Reserve

Address: Renmin Road, Dalainuor Mining District, Manzhouli City, Inner Mongolia

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30. Bibliographical references: (scientific/technical only)

- Xu Zhanjiang. *Annals of the Hulun Lake*. Jilin Literature and History Press. 1989
 - *An Integrated Survey Report of the Dalai Lake National Nature Reserve*. 1987
 - *A Bird Survey Report of the Dalai Lake National Nature Reserve*. 1995-2000
 - *The Dalai Lake National Nature Reserve Master Plan: 2001-2010*. 2000
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