

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:

08/20/2001

2. Country:

the People's Republic of China

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Designation date

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Site Reference Number

3. Name of wetland:

Xingkai Lake National Nature Reserve

4. Geographical coordinates:

E131-58' - 133-07'; N 45-01' - 45-34'

5. Elevation: (average and/or max. & min.)

59 - 81M

6. Area: 222 □ 488 ha

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

The reserve is a wetland ecosystem holding very rich biodiversity, it is one of the important components in Three-river Plain wetlands, it is not only the important habitats for some endangered species, but also important stopover sites for many migratory birds

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. 2. Tp. 1. U. 3. 4. W. Xf. 6. Xp. 8

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: 4

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 1: The Xingkai Lake Nature Reserve is located in the southeast of the Three-river Plain and the south of the Wanda Mountain. The reserve is a complicated wetland ecosystem, which includes grassland, marshes, lakes and forests; any one of the typical species in Three-river Plain can be found in the reserve. The Xingkai Lake is an international important wetland because of its special geographical status; it borders the wetlands in Russia.

Criterion 2: The reserve is the important breeding habitats for some of the first-class national protected species, such as Red-crowned Crane *Grus japonensis*(E) □ Oriental Stork *Ciconia boyciana*(E), White-tailed Sea Eagle *Haliaeetus albicilla* □ Golden Eagle *Aquila chrysaetos*. 60 individuals of Red-crowned Crane, 14-15 of Oriental Stork, 2-3 of White-tailed Eagle and 1-2 of Golden Eagle *Aquila chrysaetos*. have been breeding and staying in the reserve. Some of the second-class national protected species, such as Red-necked Grebe *Podiceps cristatus* □ Chinese Egret *Egretta eulophotes* □ White Spoonbill *Platalea leucorodia*(V) □ White-naped Crane *Grus vipio*(V) □ White-fronted Goose *Anser albifrons* □ Whooper Swan *Cygnus cygnus*(V) □ Whistling Swan *C. colmbianus*(V) □ Mandarin Duck *Aix galericulata*(V), are also breeding in the reserve. Black-necked Grebe *Podiceps nigricollis* □ Red-faced Cormorant *Phalacrocorax urile* □ Chinese Egret *Egretta eulophotes* □ Common Pochard *Aythya ferina* □ Greater Scaup *Aythya marila*, and Ruddy-breasted Crake *Porzana pusilla* are six new breeding bird species in Heilongjiang Province. *Erythroculter ilishaeformis* is native species, and one of the four well-known fresh-water fishes in China. *Pinus ussuriensis* Cheng is one of the second-class national protected species and one of the native trees.

Criterion 4: Xingkai Lake NNR is the neck path for the migratory birds in the east Asian flyway. The outlet of the lake has never been frozen, and during every spring and autumn there are thousands of migratory birds roosting at this site. Especially during late of March and early of April, there more than 35,000 migratory birds roosting at the outlet of the lake within an area of less than 10 square kilometers.

Criterion 5: The total number of the four breeding species, Black-headed Gull *Larus ridibundus* □ Whiskered Tern *Chlidonias hybrida* □ Mallard *Anas platyrhynchos* □ Spotbill Duck *A. poecilorhyncha*, reaches 20,000. The number of the main migratory species Common Pochard *Podiceps cristatus* □ Coot *Fulica atra* □ Common Goldeneye *Bucephala clangula* □ Lapwing *Vanellus vanellus* □ Bean Goose *Anser fabalis* □ White-fronted Goose *Anser albifrons* □ Pintail *Anas acuta* also reaches over 20,000.

Criterion 6: More than 60 breeding Red-crowned Crane have been found in the reserve by over-years surveys, which is 2.5% of the total number of the crane in the world.

Criterion 7: 65 fish species have been discovered belonging to 12 families of 6 orders. *Coregonus ussuriensis* and *Lota tata* are fresh water fishes of the northern polar, *Esox reicherti* and the other four are fishes of the northern plain, *Cypinus carpio*, *Carassius auratus gibelio* and the other 13 species are the fishes at the early of the Tertiary period, *Erythroculter ilishaeformis*, *Hemiculter leucisculus* and the other 23 species are fishes of the plains, *Pelteobagrus fulvidraca*, *Channa argus* J and the other 6 species are fishes of the tropical plain.

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

Xinghai Lake NNR is located in the southeast part of Heilongjiang Province, 120 km to Jixi City, 25km away from Mishan City, and at the east and south neighbor to Russia.

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□Xingkai Lake consists of two lakes, and is formed by crustal movement. Xingkai basin is an alluvial plain; the northwest is higher than the southeast, with a 10 meters high sand hill between the two lakes. The sand hill is covered by trees, and the lake is surrounded by large areas of reeds *Phragmites communis* Trin., *Dejencia angustifolia*, *Carex cyperoides* Murr. And *Sect brachypoda*.

Hydrology□Xingkai Lake belongs to the Wusuli River system. There are 24 rivers pouring into the Xingkai Lake, 8 of them are in China. Bailing River, Hongyanhapaigan River, Baipaozhi River and Jinyingku River are the four rivers that directly go into the big Xingkai Lake, and the other four, Chenzi River, Kanxin River, Daxi River and Dongdi River go into the small Xingkai Lake. Songacha River is the only outlet of the lake. Average annual frozen period is 150 days.

In he small Xingkai Lake, the amount of water pouring into the lake $7.03 \times 10^8 \text{m}^3$ □the amount of water going out of the lake $8.49 \times 10^8 \text{m}^3$, the depth 3m□the maximum storage of water $5.05 \times 10^8 \text{m}^3$ □average water level 70.60m, areas 140km^2 . In he big Xingkai Lake, the average depth 3.5m□the deepest 12m□water storage $153.3 \times 10^8 \text{m}^3$ □water level 69m, areas in China $1,040 \text{km}^2$. According to the natural geology, and the features of ground water distribution, Xingkai Lake basin is located in the rich-water area of the alluvial plain of the Mulin River, and the less-water area of the hills western of the Mulin River, and the rich-water area of the plains. The survey of the water quality indicates that the water in the lake maintains I -II class of the ground water.

Soil Type: There are 8 soil types□8 soil genus□and 19 soil species in the basin. Hill is sandy soil, and lake is muddy clay soil. The soil changes from deep brown soil to white-stiff soil. Some island-shaped forests have formed marshy brown soil.

Climate□Xingkai Lake area has mainland monsoon climate of temperate zone. In spring, the melting ice absorbs heat, and the temperature over the lake is 1°C lower than that of the surrounding area. In summer, the water absorbs heat from the sunshine, and the temperature over the lake has no big difference between and day and night. In autumn, the water gives out heat, and the temperature over the lake is 1°C higher than the surroundings. Average annual temperature 3.1°C □average highest temperature in July 21.2°C □ average lowest temperature in January -19.2°C , frost-free period 158 days, annual rainfall 750mm□most rainfall in summer□snow storm in winter, frozen period from November to March, the depth of ice 0.8-1.5m□annual accumulate temperature $2,250^\circ\text{C}$ □annual sunshine 2,570 hours.

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

Xingkai Lake have great significances in maintaining water, supplement for underground water, adjusting ground water, dispelling flood, clearing up air, adjusting climate, and eliminating pollution, etc. There is $56 \times 10^8 \text{m}^3$, $4 \times 10^8 \text{m}^3$ is available for use.

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

Xingkai Lake wetland has different types of environment from the west to the east, lower hills, lake hills, marshy area, and lakes. Different lands have different vegetations, forest trees on hills, and wormwoods on lower hills, reeds and sedges in marshes.

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

Xingkai Lake has over 460 higher plant species, in which wood plant are 37 species, vine plants are 22 species, grass plants are 263 species, moss is 1 species, medicine plants are 138 species, food fungus are 9 species, honey plants are 61 species, berry plants are 13 species, aquatic phytoplankton are 52 species. It has vegetation communities of forests, marshy grassland, marshes, and aquatic plants.

Master Plan of Xingkai Lake Nature Reserve;
Conservation Plan of Xingkai Lake Biodiversity;

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

There are 284 species of vertebrates of 6 classes of 33 orders of 73 families discovered in the reserve, in which there are 4 species of the first class national protected species (Red-crowned Crane, Oriental stork, White-tailed Sea Eagle, and Golden Eagle), and 34 species of the second-class national protected species. About 100 bird species existing in the reserve are listed in the bilateral Agreement for the Protection of Migratory Birds and their Habitats between China and Japan, which is 48.5% of the total bird species in the reserve.

There are 39 species of mammals in the Xingkai Lake wetland, in which *Vulpes vulpes*, *Lepus timidus*, *Ondatra zibethica*, *Capreolus capreolus* are the predominant species. There are 183 bird species of 16 orders of 39 families, in which waterbirds are 65 species, and 49 of them are breeding in it. 18 duck species are discovered in it, and 15 of them are breeding species, in which Mallard, Common Pochard, Green-winged Duck and Garganey are the dominant species. There are 118 species of forest birds. Ring-necked Pheasant *Phasianus colchicus*, Magpie *Pica pica*, Carrion Crow *Corvus corone*, Great Tit *Parus major* are the dominant species of residents. There are 65 fish species of 12 families of 6 orders. *Erythroculter lisbaeformis*, *Culter compressocarpus*, and *Erythroculter dabryi shikanensis* are native species in Xingkai Lake, Carps and crucians are dominant fishes in it. There are few amphibians and reptilians, only 6 species of 4 families of 2 orders for amphibians and 7 species of 4 families of 2 orders for reptilians. *Salamandrella keyserlingii* and *Rana amurensis* are dominant species in amphibians, and turtles are common species in reptilians.

Master Plan of Xingkai Lake Nature Reserve;
Conservation Plan of Xingkai Lake Biodiversity;

19. Social and cultural values: (e.g., fisheries production, forestry, religious importance, archaeological site, etc.)

In Neolithic Age, there was a well-known Bohai Culture in Xingkai Lake Basin. The rich fauna and flora and typical wetland ecosystem have made the Xingkai Lake be a valuable place for education and tourism.

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

The ownership of lands belongs to the government. The managerial rights of lands around the lake belong to the state farms and the collective villages.

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

The total area of the reserve is 222,488 ha, in which core area is 75,777 ha.

The reserve is for nature protection and scientific research

Surrounding area is for tourism, fishery, agriculture, residents living, and livestock farming.

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

The pollution from agricultural activities has affected the rivers and lakes.

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)

In April of 1986, Heilongjiang Government approved the provincial Xingkai Lake Nature Reserve. In July of 1992 a trans-boundary nature reserve was established with Khank Nauré Reserve of Russia with the help of International Crane Foundation. In April of 1994, the reserve was promoted to be a national nature reserve. In April of 1996, China and Russian Governments signed an agreement for the trans-boundary nature reserve of Xingkai Lake. In March of 1997, the reserve was appointed as a network site of the North East Asia Crane Site Network.

The reserve has established a union committee for the protection of the lake with local communities.

24. Conservation measures proposed but not yet implemented: (e.g., management plan in preparation; officially proposed as a protected area, etc.)

Plannings:

Master Plan of Xingkai Lake Nature Reserve;

Conservation Plan of Xingkai Lake Biodiversity;

Construction Plan of Xingkai Lake Resorts;

Construction Plan of Ecological Demonstration Zone.

Construction Project: Sewage Treatment Project for Xingkai Lake Paper Mill.

Eight Urgent Jobs: To establish a strong union conservation committee; To strengthen environmental education activities; To establish police station in the reserve; To develop green-food industry and organic agriculture; To centralized manage water resource; To carry out eco-tourism; To conduct general survey of the resources in the reserve; To strengthen international cooperation.

25. Current scientific research and facilities: (e.g., details of current projects; existence of field station, etc.)

The reserve has ever conducted scientific researches on the ecological studies of Red-crowned Crane, Oriental Stork, on the migration of birds in spring and fall, on the breeding ecology of Whooper Swan, Black-headed Gull, White-tailed Sea Eagle, and etc. A research division has been set up with 8 staff, and one watching tower and 5 research stations were built in the reserve. The Bayi Agriculture University, and the Northeast Forestry University are the research and training basis of the reserve.

26. Current conservation education: (e.g., visitors centre, hides, info booklet, facilities for school visits, etc.)

Cooperating with Northeast Forestry and Bayi Agriculture University, training and

education program is being conducted.
Cooperative training program with Russian Khank Lake Nature Reserve.
Setting up Educational Center.

27. Current recreation and tourism: (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

There are four resorts for eco-tourism: Dangbi Township Port; Lotus Lake; West Lake; Agricultural Farm. In 2000, there are about 500,000 visitors coming to the reserve from home and abroad.

28. Jurisdiction: (territorial, e.g. state/region, and functional, e.g. Dept of Agriculture/Dept. of Environment, etc.)
Jixi City, Forestry Dept., Heilongjiang Province.

29. Management authority: (name and address of local body directly responsible for managing the wetland)

Name : the forestry bureau of Mishan City Heilongjiang Province

Address: No. 198, Guangfu Road, Mishan City, Heilongjiang Province.158300

Tel: +86-0467-5223606

Fax: Fax:+86-467-5222656

30. Bibliographical references: (scientific/technical only)

1. Master Plan of Xingkai Lake National Nature Reserve, Heilongjiang Province, Management Bureau, Xingkai Lake Nature Reserve.
 2. Diagnosis and Analysis of the Environmental Problems of Xingkai Lake and its Surroundings, Xu Nanni, Su Fengxian, Zhang Dajun, Chinese Academy of Environmental Science.
 3. Annals of Mishan County, the People's Government of Mishan.
 4. Wildlife Resources and Research of Xingkai Lake Nature Reserve, Li Wenfa, Piao Renxhu, Northeast Forestry University Press.
 5. Feasibility Research Report of Construction Project of Biodiversity Conservation Basis of Xingkai Lake Nature Reserve, Zhao Yan, Environmental Research Institute of Heilongjiang Province.
 6. Master Plan of Xingkai Lake National Nature Reserve, Heilongjiang Province□, Management Bureau, Xingkai Lake Nature Reserve
 7. Diagnosis and Analysis of the Environmental Problems of Xingkai Lake and its Surroundings□, Xu Nanni, Su Fengxian, Zhang Dajun, Chinese Academy of Environmental Science.
 8. Annals of Mishan County, the People's Government of Mishan.
 9. Wildlife Resources and Research of Xingkai Lake Nature Reserve, Li Wenfa, Piao Renxhu, Northeast Forestry University Press.
 10. Feasibility Research Report of Construction Project of Biodiversity Conservation Basis of Xingkai Lake Nature Reserve, Zhao Yan, Environmental Research Institute of Heilongjiang Province
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