Designation date: 11/01/2002 **Ramsar Site no. 1155**

Information Sheet on Ramsar Wetlands (RIS)

2006-2008 version

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

FOR OFFICE USE ONLY
DD MM YY
Designation date Site Reference Number

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2. Date this sheet was completed/updated:

October 10, 2007

3. Country:

The People's Republic of China

4. Name of the Ramsar site:

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

Xingkai Lake National Nature Reserve

5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only):

a) Designation of a new Ramsar site; or
b) Updated information on an existing Ramsar site √

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area

The Ramsar site boundary and site area are unchanged: √

or

If the site boundary has changed:

i) the boundary has been delineated more accurately; or

ii) the boundary has been extended; or

iii) the boundary has been restricted**

and/or

If the site area has changed:

i) the area has been measured more accurately; or

ii) the area has been extended; or

iii) the area has been reduced**

** **Important note**: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

Changes of ecological characteristics are as follows: the species and individuals of waterfowls have obviously increased owing to the improvement of the ecological environment of habitats and stopovers. The recorded bird species increased from 183 to 234. The migratory individuals of *Grus japonensis* increased from over 150 to over 280 per year. And the breeding population size increased from over 60 to over 110 individuals with more than 40 couples. Adding the breeding individuals in the adjacent Russian Khankaiskii Nature Reserve, the breeding couples of *Grus japonensis* amount to over 100 in the whole Xingkai Lake Basin, which makes the largest wild *Grus japonensis* breeding population in the world. The individuals of other waterfowls that inhabit and breed within the site have distinctly increased as well.

Criterion 3, 8 are added.

7. Map of site:

Refer to Annex III of the Explanatory Note and Guidelines, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

i) **a hard copy** (required for inclusion of site in the Ramsar List):

ii) **an electronic format** (e.g. a JPEG or ArcView image) ";

iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables.** √

b) Describe briefly the type of boundary delineation applied:

The boundary of this Ramsar site is the same as the Xingkai Lake National Nature Reserve, which is 500 m west to Baileng River bridge in the west, adjacent to Muleng River in the north, sharing a common boundary with Hulin City in the northeast, adjacent to Songacha River in the

east and connected with Russian Xingkai Lake Nature Reserve in the south. Covering 222 488 ha, the site is 90-km long from east to west and 45-km wide from south to north.

8. Geographical coordinates (latitude/longitude, in degrees and minutes):

Center: 132°32' E, 45°17' N.
Extent: 131°58'-133°07' E, 45°01'-45°34' N

9. General location:

The site is located within Jixi City of Heilongjiang Province, Northeast China, and it is 130 km southeast to Jixi City.

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

The average, minimum and maximum elevations are 69 m, 59 m and 81 m, respectively.

11. Area: (in hectares)

222 488 ha

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Xingkai Lake wetland lies in the south of Sanjiang Plain, northeast of China, and belongs to inland water wetland ecosystem dominated by lakes and swamps. It is a typical representative of the alpine wetland ecosystems in the world. Xingkai Lake is a tectonic lake formed in the orogeny period, as well as the largest water body in Heilongjiang River Basin and the border lake between China and Russia. The topography is low and flat and the water area is wide. Densely covered with rivers and lakes, crossly embed with swamps and meadows, the site keeps a good original status and produces rich biological resources. Sanjiang Wetlands in China and the coniferous-broadleaved mixed forests in the Far East of Russia, which are the two biodiversity protection areas in the mid-latitude zone of the Northern Hemisphere, are linked tightly by this site that is rich in biodiversity and is a refuge for such rare endangered wildlife as *Ciconia minutes*, *Grus japonensis*, *Grus vipio* and *Pinus densiflora* var. *ussuriensis*.

The flood plain formed by Xingkai Lake and its rivers provides a significant stopover and breeding ground for 1.5-2 million migrants that move between the East Asia and Australia. Xingkai Lake holds much importance for biodiversity protection either to China, or to Asia, even or to the world.

13. Ramsar Criteria:

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.

1	2	3	4	5	6	7	8	9

14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Criterion 1: Located in a sunken basin in the mid-high latitude area formed by Laoye Mountain, Wanda Mountain in China and Preseli Mountain in Russia, Xingkai Lake wetland is a delta area enclosed by Xingkai Lake, Muleng River and Songacha River. The topography is low, holding widespread continuous marshes. The sequence of forests-shrubs-meadows-psammosere swamps-aquatic ecosystems is shown vertically from high to low elevations. Marsh vegetations in the site develop well. Due to volcanic eruption, crust movement and the sedimentary deposition carried by floods, the rivers, lakes, banks and mudflats evolved into swamp wetlands. However, the large stretches of forests in lake hillocks and uplands have not been immerged yet, thus they become a research base for the forests in Sanjiang Plain and the origin, development and succession of wetland ecosystem.

The water area of Xingkai Lake is 4 380 km^2 (of which 1240 km^2 belongs to China) and the capacity is 26.4 billion m^3. The tremendous water body and wetlands around not only provide human with various resources but also offer enormous irreplaceable ecological environment benefits.

Criterion 2: The species in this site that are listed in the IUCN Red List include 1critically endangered species, 5 endangered species and 7 vulnerable endangered species as below.

Species Latin Name	IUCN Category
Grus leucogeranus	CR
Ciconia boyciana	EN
Platalea minor	EN
Grus japonensis	EN
Anser cygnoides	EN
Mergus squamatus	EN
Grus vipio	VU
Grus monacha	VU
Egretta eulophotes	VU
Anser erythropus	VU
Aythya baeri	VU
Aquila clanga	VU
Aquila heliaca	VU

Criterion 3: Compared with the same latitude areas in Europe and Asia, Xingkai Lake wetlands hold the primary position both in species kind and number, particularly for the rare, endangered and relic species. This site nearly holds all the species of Sanjiang Plain. According to the preliminary census, it holds total 696 species of higher plants with 27 species of Ferns, 8 species of Gymnospermae, 496 species of Dicotyledoneae and 165species of Monocotyledoneae included. There are 10 species of national rare endangered plants such as *Juglans mandshurica* and *Fraxinus mandshurica*. *Pinus densiflora* var. *ussuriensis* is the endemic species in this region. According to the investigations, there are 358 species of vertebrata including 41 species of beasts, 235 species of birds, 7 species of reptiles, 7 species of amphibians, 68 species of fishes. The beasts

and birds listed in the rare endangered wildlife under state protection are 7 species and 50 species respectively.

Criterion 4: In spring and autumn of 2006, the individuals of migratory birds amount to 1.5 million in the site that is the largest staging and feeding ground in the migratory channel of Northeast Asian migrants. In Longwang Temple estuary in the northeast of Xingkai Lake (132°51′14″ E, 45°03′30″ N) which is also the riverhead of Songacha River, the water does not freeze even in the cold winter, which provides a good shelter for Asia-Pacific waterfowls when they are experiencing long trips under severe conditions in the early spring. Every spring, there are about 1200 migratory cranes of 5 species. The total individuals of migratory waterfowls amount to 0.5 million.

In 2006, there are more than 150 rare birds such as *Grus japonensis*, *Ciconia boyciana* inhabiting and breeding in the site during the breeding season. Besides, the individuals of other breeding birds belonging to Family Anseriformes, Charadriidae, Scolopacidae, Laridae and Ardeidae amount to over 65 thousand.

Criterion5: There are 45 thousand waterfowls under 49 species, including umbrettes, ducks and gulls, inhabiting and breeding in the site.

According to the census in autumn of 2006, there are 185 184 birds under 118 species of 38 families of 15 orders in partial core area and experiment area of the reserve. *Anas platyrhynchos* and *Anas poecilorhyncha* are the dominant species, accounting for 75% of the total.

In spring of 2007, there are 130 726 migrants of 83 species recorded in local areas. It is estimated that the total number of migrants could amount to 1.5 million in the whole Xingkai Lake wetlands.

Criterion6: There are 5 waterfowls that can achieve the standard of 1% abundance.

Species Latin Name	Individuals, migratory time	1%
Grus vipio	1072 (migrate in spring of 2004)	30
Grus japonensis	280 (migrate in spring of 2006)	10
Grus monacha	40 (migrate in spring of 2006)	15
Anser erythropus	6400 (migrate in spring of 2006)	110
Ciconia boyciana	31 (inhabit in summer of 2006)	30

Criterion 7: There are 68 fish species falling into 12 families of 6 orders in this site, which covers the most fish species in Sanjiang Plain. Possessed of fishes in the north frigid zone, subfrigid zone, north temperate zone and subtropical zone, the fish species present the features of the ecozone (Palaearctic realm and in Sino-Indian subrealm) and complex fauna. Not only the species but also the individual number of the fish is representative in Palaearctic realm. Particularly, the site holds endemic species, such as *Erythroculter dabryi shinkainensis*, *Hemiculter leucisculus*, *Hemiculter bleekeri* and *Acheilognathus chankaensis*.

Criterion 8: Xingkai Lake covers 4 380 km^2. With a large number of lakes and dykes, the site becomes an important place for fish to spawn, increase weight, and breed offspring. Extensive reed marshes hold a great deal of planktons and hydrophytes, which provide foods and living environment to different fish species and support a great number of birds. Some fishes of Cyprinidae, taking *Erythroculter ilishaeformis* for instance, have the habit of migrating from the south or the middle to the north to lay eggs.

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

Northeast China Region, Northeast China Subrealm, Palaearctic realm

b) biogeographic regionalisation scheme (include reference citation):

The Biogeography of Fauna in China (Zhang Rongzu, 1999)

16. 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.

Geology and geomorphology: Xingkai Lake is a tectonic lake formed by the rupturing and sinking of the earth's crust. Xingkai wetland belongs to a unit of the large geomorphology of Sanjiang Plain, and its general topography is high in the northwest and low in the southeast. Geomorphologic types are mostly represented as flood plain and lake shoal. Xingkai Lake is low-lying with complex micro-topographies, many ancient riverways, ox-bow lakes, dish-like lowlands and a large area of lake alluvial low plains.

Hydrology: Xingkai Lake is composed of a small lake (the Small Xingkai Lake) and a large one (the Great Xingkai Lake), and hold a water capacity of 0.3 billion m^3. There are three large water systems within the site, i.e. Muleng River, Xingkai Lake and Songacha River. Muleng River is 502 km and the catchment area is 15 184 km^2. Originated from the Changbai Mountains, Muleng River flows into the Small Xingkai Lake through Dongdi River. With a drainage area of 36.4 thousand km^2, the Great Xingkai Lake occupies 4 380 km^2, 1 240 km^2 of which belongs to China. The whole catchment area is 36.4 thousand km^2. The normal water level of the lake is 69 m, and the average water depth is 3.5 m. There are 24 rivers flowing into Xingkai Lake, such as Baibaozi River and Sibasuofu River. Songacha River is the only outlet of the lake and is also one of the sources of Wusuli River. Its riverways extend ambagiously for 209 km, 172 km of which belongs to the reserve with 7 branches flowing into. The catchment area is 4 100 km^2. The river is 10-60m wide and the water depth is 2-10m.

Water quality: The Great Xingkai Lake has not been contaminated in essence. The good water quality of the large lake is up to the state's first-class standard for the environmental quality of surface water, while water quality of the small lake meets the second-class standard. The water body of these two lakes is so huge together with the purification of surrounding wetlands that the water quality can keep relatively stable. The water quality indexes are as follows: the ground water is clear without any ill smell. The pH value is 6.5-8.5 and the mineralization degree is low. The water in the lake belongs to soft water or very soft water. Neither sulfate radical ion nor chloride ion meets the national standards for the daily drinking water quality whereas nitrate nitrogen achieves. The P content is 0.1mg/l, exceeding the standard. The Fe contents in the large and small lakes are relatively less, whereas in other ground water the Fe contents all exceed the standard.

Soil structure: The main soil types in the reserve are bog soil and whit-stiff soil. Following

the decline in elevation, sandy soil and sandstone dark brown soil on the lake hillocks and uplands changes to meadow dark brown soil and whit-stiff soil. The large area of paddy soil is formed in paddy fields.

Climate: The site belongs to temperate continental monsoon climate. Influenced by the huge water of Xingkai Lake, this area has its own special microclimate. The annual average temperature is 3 □. It is coldest in January with a mean monthly temperature of -18 □ and an extreme low temperature of -39 □. It is hottest in July with a mean monthly temperature of 21 □ and an extreme high temperature of 36 □. The mean annual precipitation is 654 mm. The maximum monthly precipitation occurs in August with a mean value of 119.7 mm and the minimum precipitation happens in January with a mean value of 5.4 mm. The mean annual sunshine hours are 2 574. The frost-free period lasts for 147 days and the freeze-up period of the lake water lasts for 160 days.

17. Physical features of the catchment area:

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

Belonging to Wusuli River system, Xingkai Lake region consists of Muleng River Basin and Xingkai Lake Basin. The main lakes are the Small Xingkai Lake and the Great Xingkai Lake. The northwest part of the catchment is higher than the southeast part, and the slope is gentle. Within the catchment, Wanda Mountain lies in the north and Fengmi Mountain in the south, both of which have elevations ranging between 200 and 684 m. The main rivers are Muleng River, Peideli River, Guokui River, Songacha River, Liumao River, Diaolong River and so on. Arable lands consist of low hills, plains and lowlands, the altitudes of which are all between 200 m and 900 m. The total area of the arable lands is 4 439 km^2, accounting for 57% of the Jixi area.

The catchment belongs to the cold temperate continental monsoon climate. It is cold and snows little in the long winter. Whereas it is hot and wet in the summer with abundant rainfall. Muleng Basin often suffers from floods. Spring and autumn are short with a changing climate and the temperature difference between day and night is great enough to reach 15 □. There is strong wind and little rain in spring, thus it is apt to drought in the site. But in autumn there is a sharp cooling accompanying with frosts. The mean annual temperature is 2.5-3.1 □, and the highest temperature is over 30 □ in July, of which the historical highest is 36.7 □. The lowest temperature ranges between -34 □ and -30 □. The accumulation changing temperature above 10 □ is 2 400 □-2 564 □. The frost-free period lasts for 106-151 days per year and even 140-160 days in the central or south areas.

18. Hydrological values:

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

The catchment area of Muleng River is 15 184 km^2. The mean annual water influx is 1.2 billion m^3, all of which flow into the Small Xingkai Lake through Paozi wetland. The maximum capacity of the Small Xingkai Lake is 0.505 billion m^3, while that of the Great Xingkai Lake amounts to 5.33 billion m^3. The quality of surface water is preferable for life, pasturage, fishery

and irrigation in general. There is abundant ground water within the basin and the total water storage is 5.6 billion m^3, 0.4 billion of which can be used. The Small Xingkai Lake and surrounding marshes are screens for protecting the large Xingkai Lake. They take up more than 90% of the inflowing water that can be purified and degraded and then runs into the Great Xingkai Lake. Having a reputation of "a natural reservoir", Xingkai Lake and surrounding wetlands have supported the sustainable development of local society and economy with material basis and environmental capital for the rich biodiversity and the high productivity. There are such ecological benefits as maintaining biodiversity, redistributing flood, regulating surface runoff, recharging groundwater, avoiding natural disasters, regulating local climate and degrading pollutants.

19. Wetland Types

a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

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)

b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

O: The area of lakes is 124 667 ha, accounting for 56.03%.
Tp: The area of permanent aquatic herbaceous marshes is 46 364 ha, accounting 20.83%.
Human-made wetlands cover 42 697 ha, accounting for 19.19%.
W: Shrub wetlands cover 2 750 ha, accounting for 1.24%.
Xf: Fresh forest marshes cover 2 460 ha, accounting for 1.10%.

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The habitats, as well as flora and fauna are complex in this site. Forest, shrub, meadow and marsh form various habitats. The forests in the site are coniferous and broadleaved mixed forests mainly consisting of *Ouercus mongolica*, *Pirns ussuriensis* and *Fraxinus mandshurica*. There are large beasts such as *Felis lynx* and *Vulpse vulpse* and birds such as *Strix uralensis* and *Garrulus glandarius* inhabiting in the forest.

Shrubs mainly consist of *Malus baccata* and *Sorbus pohuashanensis* in which small beasts such as *Cricetulus barabensis* and *Lepus timidus* and birds such as *Sturnus sturninus* and *Lanius tigrinus* inhabit.

Meadows belong to azonal vegetation and its representatives are *Calamagrostis angustifolia*,

Calamagrostis epigejos, and other weeds. Some herbivores such as *Capreolus capreolus* and *Cervus elaphus* and some birds such as *Acrocephalus orientalis* and *Turdus naumanni* live in the meadows.

Herbaceous marshes are widely distributed on the lowlands and river floodplains, including *Carex pseudocuraica* marsh, *Glyceria Triflora* marsh, *Phragmites Australis* marsh and weed marsh, where animals and hydrobios live. Animals consisting of small beasts and birds (such as *Anas platyrhynchos*, *Fulica atra*) inhabit in the low-altitude areas such as of river banks and flood areas of river valley.

The agriculture ecosystems contain glebe ecosystem and paddy field ecosystem. The former one is located on the terraces before low hills, with crops (corn, soybean and wheat as the main), fowls and livestock. Whereas the latter is a farm agriculture ecosystem comprised of simplex rice and the feeding of fowl and livestock on the plain farmland areas.

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) 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 RIS.***

Xingkai Lake National Nature Reserve exhibits a complex mosaic of semi-natural ecosystem and semi-artificial ecosystem. Natural ecosystem is comprised of forest, shrub, meadow, marsh and aquatic ecosystems, while semi-natural ecosystem includes glebe and paddy field ecosystems, with agriculture ecosystem as its representative. Warm-season and cold resistance vegetations in Xingkai Lake area are largely scattered and the species is abundant with more herbaceous plants and less woody plants. The density of dominant population is large and the biomass is quite ample.

The lake hillocks between the Small Xingkai Lake and the Great Xingkai Lake link the Sichote-Alin Mountains in Russia and the Wanda Mountain in China, which are unique to the biodiversity in the site. The climax forest vegetation consists of oaks, lindens and birches. In addition, there are numerous tertiary relic species such as *Phellodendron amurense* and *Juglans mandshurica*.

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. ***Do not include here taxonomic lists of species present - these may be supplied as supplementary information to the RIS.***

This Ramsar site holds rich resources of wild animals with total 358 species of vertebrate included. There are 68 species of fish, 7 species of amphibian, 7 species of reptile and 41 species of beasts with 6 species of animals under state protection such as *Cervus nippon Temminck*, *Ursus thibetanus*, *Cervus elaphus* and *Felis lynx*. Recorded birds in the site are 235 species (361 species within the catchment in total). There are 50 species of birds under state protection, 9 species under

the first-class state protection such as *Grus japonensis*, *Mergus squamatus*, *Ciconia minutes* and *Haliaeetus albicilla*, and 41 species under the second-class state protection including *Grus vipio*. Compared with those birds in Asia and Europe of mid-latitude, birds in Xingkai Lake are primary both in species and in number. There are 5 cranes species in the site, accounting for 33.3% of the world cranes, including inhabiting and breeding species such as *Grus japonensis* and *Grus vipio* and migratory species such as *Grus leucogeranus*, *Grus monacha* and *Grus grus.* Besides, the site is an important inhabiting and breeding ground for *Haliaeetus albicilla* and *Haliaeetus pelagicus*.

23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

The ample fishery resources make one of the primary industries in Xingkai Lake. The catch amount per year exceeds 1 000 tons and the mean annual catch amount in the Great Xingkai lake is about 400 tons while in the Small Xingkai Lake over 600 tons.

Forests in Xingkai Lake are all admitted as national key ecological commonweal forests, and are managed and protected by local residents funded by the state.

The Xinkailiu site near Xingkai Lake is a new fishery civilization created by Sushen People, which is the ancestor of Man nationality (one of the two largest indigene nationalities in the history of Northeast China) 6 100 years ago. Also it has been a Xinkailiu civilization with earlier excavation and the most unearthed cultural relics in Heilongjiang Province so far, as well as a civilization that can comprehensively and systematically reflect ancient Sushen People's fishing and hunting, the art of engraving, religious faith and folk rituals. Besides, Xingkai Lake is the origin of Ewenke nationality. Such Xingkai Lake cultures as "Haidong culture", "Five-Country culture" and "Beidahuang military reclamation culture" have become the representative of the black soil culture.

Along with the development of tourism, the beautiful and rich Xingkai Lake has been a new tourist site currently.

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?

Yes.

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:

Ecological agriculture demonstration zones have been established in all the farms of Xingkai Lake to provide green agriculture products. Reeds in the wetland have been intermittently cut so

that birds' survival conditions and the integrality and purifying function of the wetland vegetations can be guaranteed. The development of ecotourism and the integration of education and popular science not only improve the public awareness of wetland protection but also enhance the development of local economy.

√ ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:

The Xinkailiu relic is the only fish cellar relic from the Neolithic Age and holds the largest and the most tombs in Heilongjiang Province. Shamanism, the most ancient religion, has been verified in this site. This site is the earliest Neolithic site excavated in Heilongjiang Province, possessing of the bones of pioneer domesticating ossifrage, a fish sculptured with buckhorn as the earliest object of veneration which is popular in primitive society, the pottery sculptures of human head that is the representative of Shamanism, the earliest arts such as scale ripples and water ripples and the largest and the most tombs. Xingkai Lake is the origin of Ewenke nationality. The "military reclamation culture" in 1950s and "educated youth culture" in 1960s established a solid foundation for black soil culture of which the representative is Xingkai Lake culture.

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:

24. Land tenure/ownership:

a) within the Ramsar site:

The land ownership belongs to the state. The tenure of land use belongs to the local governments. According to correlated laws and regulations, the reserve supervises and harmonizes the land use.

b) in the surrounding area:

The surrounding areas include state-owned land and collective-owned land. The administrative institutions of the reserve have the right to make suggestions.

25. Current land (including water) use:

a) within the Ramsar site:

The whole Xingkai Lake wetland is within the reserve. It can be divided into three areas by function.

Core areas cover 57 454 ha, accounting for 25.8% of the total area. There are some scientific research and monitoring activities and few human activities.

Buffer areas cover 7 923 ha, accounting for 3.7% of the total area. Forests, marshes, rivers and lakes dominate and areas for agriculture planting are less.

Experiment areas cover 157 111 ha, accounting for 70.5% of the total area. Most of these patches are lakes and farmlands. Land utilization includes planting, aquiculture, fishery and ecotourism.

b) in the surroundings/catchment:

There are forests, river floodplains, meadows and farmlands in the surroundings. The main crops are corns, soybeans and rice. Land uses include planting, aquiculture, tourism and grazing. There is not any large industrial enterprise.

26. 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 Ramsar site:

None.

b) in the surrounding area:

The agricultural and residential activities in the catchment could produce some influences on the wetland.

27. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

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

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.

Xingkai Lake Provincial Nature Reserve was established in 1986 and was promoted to a national nature reserve in 1994. Xingkai Lake International (trans-border) Nature Reserve was set up in 1997 according to the “Agreement on Xingkai Lake Nature Reserve” subscribed by Russia and China in 1996, and it was appointed as a Ramsar wetland in 2002. The boundary accords with the national nature reserve. In 2007, it participated in world Biosphere Reserves.

The site is not included in the Montreux record.

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

Master Plan for Xingkai Lake National Nature Reserve (national, 2007)
Environmental Protection Plan for Xingkai Lake National Nature Reserve (provincial, 2005)
Master Plan for Xingkai Lake National Geological Park (national, 2006)

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

No

d) Describe any other current management practices:

The united conservation committee of Xingkai Lake National Nature Reserve consisting of community administrative leaders and the reserve bureau as its core has been set up to carry out the condominium of community and the reserve. Through mandatory administration and condominium, community units have been attracted to join in the management. Community incomes have been increased by hiring residents to attend the management and protection of forests with ecological efficiency.

28. Conservation measures proposed but not yet implemented:
e.g. management plan in preparation; official proposal as a legally protected area, etc.

Ecological Environment Control Plan for Xingkai Lake Area across Russia and China (2006)
Vegetation Restoration Plan for Xingkai Lake Hillocks (submitted to the state, 2005)
Recovery Plan for Xingkai Lake Fishery Resources (2006)
Plan for Construction of Trans-border Biosphere Reserve in Xingkai Lake (2007)

29. Current scientific research and facilities:
e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Since the reserve was established, five provincial/municipal scientific research projects were conducted by the reserve, and over 40 research articles got published. The reserve has carried out birds monitoring for continuous 6 years. Since 2005, the reserve cooperates with Russian Khankaiskii Nature Reserve to monitor birds in Xingkai Lake and cranes in Northeast China. Since 2007, the state has carried out the Russia-China trans-border monitoring on the water quality of Xingkai Lake. Since 2005, the GEF international project on the restoration of Xingkai Lake wetland of Sanjiang Plain has been implemented. In 2005, the reserve cooperated with Northeast Forestry University to carry out research on red-crowned cranes' habitats and fish resources.

Scientific facilities include a monitoring station for water quality of the first national level, a monitoring station for epidemic diseases and pestilence of wildlife in Xingkai Lake, a practice teaching base for students of Northeast Forestry University. Currently, scientific institutions of the reserve have been equipped with regular monitoring facilities.

30. 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.

There is a training center covering 2 400 m^2, a propaganda and education center covering 2 100 m^2 and the Beidahuang Memorial covering 500 m^2. The reserve has printed 1 600 booklets and 40 propaganda scrolls per year in average since 2003.

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

Xingkai Lake geological museum (tourists' center) in the reserve, Beidahuang memorial in the west Dangbi Town and Beidahuang calligraphy corridor in Mishan City are bases of patriotism and popular science education for youths and tourists. There are a winding bridge and a large yacht in the Small Xingkai Lake. In the exploring activities of ecotourism, some alleyways in the core area have been built.

Under the premise of strictly protecting resources and environment, the reserve cooperates

with the local government to implement seasonal ecotourism focusing on bird-watching, wetland landscape and local characteristic culture. The experiment areas covering 2 546 ha in lake hillocks with abundant touring resources have been developed for ecotourism. These tourist attractions can receive 300 thousand people per year in average.

32. Jurisdiction:

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

Territorial: the government of Jixi City

Functional: the State Forestry Administration and the Forestry Bureau of Heilongjiang Province

33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organization(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Institution: Bureau of Xingkai Lake National Nature Reserve, Heilongjiang
Principal: Changjie Cui (director)
Address: 18 Hongqi Road, Jiguan District, Jixi City, Heilongjiang Province, China
Tel: +86-(0)467-6185001
Fax: +86-(0)467-6185011

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

[1] Li Wenfa, Peng Kemei, Piao Renzhu. 1994. Xingkai Lake Nature Reserve Wild Fauna and Research. Harbin: Northeast Forestry University Press

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[7] Nominating Form on Xingkai Lake World Biosphere Reserve, 2007

[8] Jiang Zuofa. 1998. The Fishery Resources in Heilongjiang River, Wusuli River, Suifen River and Xingkai Lake. Harbin: Northeast Forestry University Press

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[11] Wang Xianpu, Yu Shunli, Liu Zhenjie. 2005. Xingkai Lake Reserve in Heilongjiang Province, its Main Features And Effective Management. Chinese Wildlife, 2: 29-32