

# Ramsar Information Sheet

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# **China**Xingkai Lake National Nature Reserve



Designation date 8 January 2002 Site number 1155 Coordinates 45°15'58"N 132°40'06"E Area 222 488,00 ha

https://rsis.ramsar.org/ris/1155 Created by RSIS V.1.6 on - 18 May 2020

# Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

# 1 - Summary

#### Summary

This Ramsar Site is located in the south of Sanjiang Plain, northeast 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. 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 midlatitude zone of the Northern Hemisphere, are interconnected by this Site that is rich in biodiversity and is a refuge for internationally important species such as the critically endangered Yangtze Sturgeon (Acipenser dabryanus), Chinese Sturgeon (Acipenser sinensis) and Baer's Pochard (Aythya baeri), the endangered Oriental Stork (Ciconia boyciana), Red-crowned Crane (Grus japonensis), Scaly-sided Merganser (Mergus squamatus), Eastern Curlew (Numenius madagascariensis), and the vulnerable White-naped Crane (Grus vipio), Velvet Scoter (Melanitta fusca), Hooded Crane (Grus monacha) and Asian Black Bear (Ursus thibetanus). 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 globally.

# 2 - Data & location

#### 2.1 - Formal data

2.1.	1 -	Name	and	address	of the	compile	er of	this	RIS
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# 2.1.2 - Period of collection of data and information used to compile the RIS

From year 2008

To year 2014

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

Xingkai Lake National Nature Reserve

# 2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A Changes to Site boundary Yes O No 

(Update) B. Changes to Site area

No change to area

#### 2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?
(Update) Are the changes Positive   Positive Positive Negative Neg
<sup>(Update)</sup> No information available ✓
(Update) Changes resulting from causes operating within the existing boundaries?
(Update) Changes resulting from causes operating beyond the site's boundaries?
Update) Changes consequent upon site boundary reduction alone (e.g., the exclusion of some wetland types formerly included within the site)?
(Update) Changes consequent upon site boundary increase alone (e.g., the inclusion of different wetland types in the site)?

(Update) Please describe any changes to the ecological character of the Ramsar Site, including in the application of the Criteria, since the previous RIS for the site.

The species and individuals of waterfowls have obviously increased due to the improvement of habitats and stopovers. The recorded bird species increased from 234 to 285. 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 breeding individuals of Ciconia boyciana increased from 30 to 96, which makes the largest Ciconia boyciana breeding population in China.

(Update) Is the change in ecological character negative, human-induced AND a significant change (above the limit of acceptable change)

# 2.2 - Site location

#### 2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

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#### Boundaries description

The boundary of this Ramsar Site is almost 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

#### 2.2.2 - General location

a) In which large administrative region does the site lie?	In Jixi City, Heilongjiang Province, PR China
b) What is the nearest town or population	The nearest town is Dangbi Town.

# 2.2.3 - For wetlands on national boundaries only

- a) Does the wetland extend onto the territory of one or more other countries? Yes  $\ensuremath{\mathbf{0}}$  No O
- b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes  $\odot$  No  $\circ$

#### 2.2.4 - Area of the Site

Official area, in hectares (ha): 222488

Area, in hectares (ha) as calculated from GIS boundaries

#### 2.2.5 - Biogeography

#### Biogeographic regions

biogeographic regions											
Regionalisation scheme(s)	Biogeographic region										
Udvardy's Biogeographical Provinces	Temperate broad-leaf forests or woodlands, and subpolar deciduous thickets, Manchu- Japanese Mxed Forest Biogeographic Province, Palaearcitc Realm										

# 3 - Why is the Site important?

#### 3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

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.

Otner reasons

The water area of Xingkai Lake is 4 380 km2 (of which 1240 km2 belongs to China) and the capacity is 26.4 billion m3. The water area of Little Xingkai Lake is 176 km2 and the capacity is 300 million m3. The tremendous water body and wetlands around not only provide human with various resources but also offer enormous irreplaceable ecological environment benefits.

- ☑ Criterion 2 : Rare species and threatened ecological communities
- ☑ Criterion 3 : Biological diversity

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 165 species 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 408 species of vertebrata including 41 species of beasts, 285 species of birds, 8 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 5 species and 55 species respectively.

Justification

☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions

☑ Criterion 5: >20,000 waterbirds

Overall waterbird numbers 90 770, 129 721, 145 007

Start year 2011

Source of data: The monitoring data from the reserve

☑ Criterion 6 : >1% waterbird population

☑ Criterion 7 : Significant and representative fish

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 species, such as Erythroculter dabryi shinkainensis, Hemiculter leucisculus, Hemiculter bleekeri, Acheilognathus chankaensis and Culter dabryi shinkainensis.

#### ☑ Criterion 8 : Fish spawning grounds, etc.

Xingkai Lake covers 4 380 km2 and Little Xingkai Lake covers 176 km2 with a large number of lakes and dykes, the site becomes an important place for fish to spawn, increase weight, and breed offspring. The north to Xingkai Lake is sand lake with east and south to it is muddy bottom. The area of Phragmites Justification australis and swamp is very large. 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.

3.2 - Plant species whose presence relates to the international importance of the site

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Fraxinus mandshurica			<b>*</b>			<b>✓</b>		
Juglans mandshurica			<b>V</b>					
Pinus sylvestris mongolica			V					

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Common name	qua un crite	ecies lifies ider erion 6 9	Spe contri un crite	butes der erion	Pop. Size	Period of pop. Est.			CITES Appendix I	CMS Appendix I	Other Status	Justification
Birds														
CHORDATA/ AVES	Anas acuta	Northern Pintail			<b>Z</b>		3247 2	2011-2013	1.3	LC Sign				
CHORDATA/ AVES	Anas clypeata	Northern Shoveler			<b>V</b>		4949 2	2011-2013	0.9	LC ●部				
CHORDATA/ AVES	Anas crecca	Eurasian Teal; Green-winged Teal					9231 2	2011-2013	1.2	LC om				
CHORDATA/ AVES	Anas falcata	Falcated Duck; Falcated Teal					7618 2	2011-2013	9.2	NT				
CHORDATA/ AVES	Anas formosa	Baikal Teal					11310 2	2011-2013	1.6	LC S語		<b>₽</b>		
CHORDATA/ AVES	Anas platyrhynchos	Mallard					16992 2	2011-2013	1.1	LC	<b></b>			
CHORDATA/ AVES	Anas poecilorhyncha	Indian Spot-billed Duck; Spot-billed Duck					5677 2	2011-2013	5.6	LC Star				
CHORDATA/ AVES	Anser albifrons	Greater White- fronted Goose		<b>/</b>			1774 2	2011-2013	9.8	LC om			National Protection Class: II	

Phylum	Scientific name	Common name	Species qualifies under criterion	cc	Species ntribute under riterior 5 7	Pop. Size	Period of pop. Es	% occurrence		CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Anser cygnoides	Swan Goose		1		1184	2011-2013	1.7	VU ●# ◎™		<b>₽</b>	National Protection Class: II	
CHORDATA/ AVES	Anser erythropus	Lesser White- fronted Goose				2123	2011-2013	8	VU ●# ◎™		<b>₽</b>		
CHORDATA/ AVES	Anser fabalis	Bean Goose		<b>V</b>		1147	2011-2013	38	LC •#				
CHORDATA/ AVES	Aquila clanga	Greater Spotted Eagle		<b>/</b>					VU ●\$: ●∰		V	National Protection Class: II	
CHORDATA/ AVES	Aquila heliaca	Asian Imperial Eagle; Eastern Imperial Eagle							VU Sign	$\checkmark$	<b></b> ✓	National Protection Class: I	
CHORDATA/ AVES	Aythya baeri	Baer's Pochard		<b></b>		21	2011-2013	4.2	CR ●# ●#		<b>₽</b>		
CHORDATA/ AVES	Aythya fuligula	Tufted Duck		<b>V</b>		11272	2011-2013	4.7	LC Sign				
CHORDATA/ AVES	Aythya marila	Greater Scaup				6149	2011-2013	2.5	LC Sign				
CHORDATA/ AVES	Brachyramphus marmoratus	Marbled Murrelet	<b>2</b> 000	<b>V</b>					EN ●数 ●翻				
CHORDATA/ AVES	Branta bernicla	Brant; Brant Goose; Brent Goose		<b>V</b>		57	2011-2013	1.4	LC Sign				
CHORDATA/ AVES	Bucephala clangula	Common Goldeneye				10010	2011-2013	1	LC Sign				
CHORDATA/ AVES	Ciconia boyciana	Oriental Stork; Oriental White Stork		<b>V</b>		53	2011-2013	1.8	EN ●\$ ●®	V	V	National Protection Class: I	
CHORDATA/ AVES	Emberiza aureola	Yellow-breasted Bunting		<b>/</b>					EN ●Si ●SI		<b>V</b>		
CHORDATA/ AVES	Grus japonensis	Red-crowned Crane		<b></b>		73	2011-2013	18	EN Sign	<b>✓</b>	<b>₽</b>	National Protection Class: I	stopover and feeding ground
CHORDATA/ AVES	Grus leucogeranus	Siberian Crane		<b>V</b>						<b>√</b>	<b></b>	National Protection Class: I	stopover and feeding in the site
CHORDATA/ AVES	Grus monacha	Hooded Crane				25	2011-2013	2.5	<b>VU</b> ●\$* ●\$#	<b>√</b>	<b></b> ✓	National Protection Class: I	stopover and feeding in the site
CHORDATA/ AVES	Grus vipio	White-naped Crane		<b>V</b>		122	2011-2013	16	VU ●# ●#	V	<b></b>	National Protection Class: II	stopover and feeding in the site
CHORDATA/ AVES	Haliaeetus pelagicus	Steller's Sea Eagle; Steller's Sea-Eagle	<b>2</b> 00						VU ●\$3 ●翻		<b>2</b>	National Protection Class: I	
CHORDATA/ AVES	Melanitta fusca	Velvet Scoter; White-winged Scoter	<b>2</b> 00	<b>V</b>					VU © SSS				
CHORDATA/ AVES	Mergus squamatus	Scaly-sided Merganser	<b>2</b> 000						EN S			National Protection Class: I	
CHORDATA/ AVES	Numenius madagascariensis	Eastern Curlew; Far Eastern Curlew	<b>2</b> 000	<b>V</b>					EN ●SF		V		
Fish, Mollusc	and Crustacea												

Phylum	Scientific name	Common name	Species qualifies under criterion	Species contributes under criterion 3   5   7   8	Pop. Size	Period of pop. Est.	IUCN Red List		CMS Appendix I	Other Status	Justification
	Acipenser dabryanus	Yangtze Sturgeon	<b>2</b> 000				CR ●\$ ●\$			National Protection Class: I	Most northerly breeding locality in China
CHORDATA/ ACTINOPTERYGII	Acipenser sinensis	Chinese Sturgeon	<b>2</b> 000				CR ●数 ●瞬			National Protection Class: I	
	Hemiculter bleekeri	Minnow	0000								endemic species
	Hemiculter leucisculus	Sharpbelly									endemic species
Others											
	Ursus thibetanus	Asian Black Bear				_	VU ●\$ ●∰	<b>V</b>		National Protection Class: II	

<sup>1)</sup> Percentage of the total biogeographic population at the site

#### Criterion 4:

In spring and autumn of 2011, 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 1600 migratory cranes of 5 species.

#### Criterion 5:

According to the census of birds in Longwang Temple - Songacha River estuary in 2011, 2012 and 2013, there are 90 770 birds in the spring of 2011, 129 721 birds in the spring of 2012 and 145 007 birds in the spring of 2013 (see Appendix 1).

# 3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>

# 4 - What is the Site like? (Ecological character description)

# 4.1 - Ecological character

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. Forests, shrubs, meadows and marshes form various habitats. The forests in the Site are coniferous and broadleaved mixed forests mainly consisting of Quercus mongolica, Pirns ussuriensis and Fraxinus mandshurica. There are large mammals such as Felis lynx and Vulpes vulpes and birds such as Strix uralensis and Garrulus glandarius inhabiting in the forest, which mainly distributed in the honey hill, lake and low hilly areas. Shrubs are mainly distributed in lake banks, island forest, water bubbles around the rivers and lake, wetlands, edge of forest and so on.

Meadows are not zonal vegetation in this Site but are mainly distributed in the lake and edge of marsh. 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.

Having a reputation of "a natural reservoir", Xingkai Lake and surrounding wetlands have supported rich biodiversity and high productivity in nature. There are such ecosystem services as maintaining biodiversity, redistributing flood, regulating surface runoff, recharging groundwater, avoiding natural disasters, regulating local climate and degrading pollutants.

#### 4.2 - What wetland type(s) are in the site?

#### Inland wetlands

Hand Wellands				
Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> L: Permanent inland deltas				
Fresh water > Flowing water >> Mt Permanent rivers/ streams/ creeks				
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		1	124667	Rare
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools		2	46364	Representative
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		3	42697	
Fresh water > Marshes on peat soils >> U: Permanent Non- forested peatlands				
Fresh water > Marshes on inorganic soils >> W: Shrub- dominated wetlands		4	2750	
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		0	2460	

#### Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
1: Aquaculture ponds				
2: Ponds				
3: Irrigated land				
4: Seasonally flooded agricultural land				
6: Water storage areas/Reservoirs				
7: Excavations		0		
8: Wastewater treatment areas				

# 4.3 - Biological components

#### 4.3.1 - Plant species

<no data available>

#### 4.3.2 - Animal species

#### Other noteworthy animal species

Other noteworthy animal species							
	Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
	CHORDATA/AVES	Accipiter gentilis	Northern Goshawk				National Protection Class:

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/AVES	Accipiter nisus	Eurasian Sparrowhawk				National Protection Class:
CHORDATA/AVES	Accipiter virgatus	Besra				National Protection Class:
CHORDATA/AVES	Aegolius funereus	Boreal Owl				National Protection Class:
CHORDATA/AVES	Aegypius monachus	Cinereous Vulture				National Protection Class:
CHORDATAAVES	Aix galericulata	Mandarin Duck	19	2011-2013	0.1	National Protection Class:
CHORDATA/AVES	Aquila chrysaetos	Golden Eagle				National protection class: I
CHORDATA/AVES	Asio flammeus	Short-eared Owl				National Protection Class:
CHORDATAAVES	Asio otus	Long-eared Owl				National Protection Class:
CHORDATA/AVES	Bubo bubo	Eurasian Eagle-Owl				National Protection Class:
CHORDATAAVES	Bubo scandiacus	Snowy Owl				National Protection Class:
CHORDATAAVES	Butastur indicus	Grey-faced Buzzard				National Protection Class:
CHORDATA/AVES	Buteo buteo	Common Buzzard				National Protection Class:
CHORDATAAVES	Buteo hemilasius	Upland Buzzard	29	2011-2013		National Protection Class:
CHORDATA/AVES	Buteo lagopus	Roughleg;Rough-legged Buzzard;Rough-legged Hawk				National Protection Class:
CHORDATAAVES	Carpodacus erythrinus	Common Rosefinch				National protection class: I
CHORDATA/AVES	Ci∞nia nigra	Black Stork				National protection class: I
CHORDATA/AVES	Circus cyaneus	Northern Harrier				National Protection Class:
CHORDATAAVES	Circus melanoleucos	Pied Harrier	9	2011, 2013		National Protection Class:
CHORDATA/AVES	Circus spilonotus	Eastern Marsh Harrier				National Protection Class:
CHORDATA/AVES	Cygnus columbianus	Tundra Swan				National Protection Class:
CHORDATA/AVES	Cygnus cygnus	Whooper Swan				National Protection Class:
CHORDATA/AVES	Falco columbarius	Merlin				National Protection Class:
CHORDATA/AVES	Falco peregrinus	Peregrine Falcon				National Protection Class:
CHORDATA/AVES	Falco rusticolus	Gyrfalcon				National Protection Class:
CHORDATA/AVES	Falco subbuteo	Eurasian Hobby,Northern Hobby				National Protection Class:
CHORDATA/AVES	Falco tinnunculus	Common Kestrel;Eurasian Kestrel				National Protection Class:
CHORDATA/AVES	Falco vespertinus	Red-footed Falcon				National Protection Class:
CHORDATA/AVES	Grus grus	Common Crane	87	2013	0.58	National Protection Class:
CHORDATA/AVES	Haliaeetus albicilla	White-tailed Eagle	27	2011-2013		National protection class: I

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/AVES	Hydrocoloeus minutus	Little Gull				National Protection Class:
CHORDATA/AVES	MIvus migrans	Black Kite				National Protection Class:
CHORDATA/AVES	Ninoxscutulata	Brown Hawk-Owl				National Protection Class:
CHORDATA/AVES	Numenius minutus	Little Curlew				National Protection Class:
CHORDATA/AVES	Otus bakkamoena	Collared Scops Owl				National Protection Class:
CHORDATA/AVES	Otus scops	Eurasian Scops Owl				National Protection Class:
CHORDATA/AVES	Pandion haliaetus	Osprey,Western Osprey				National Protection Class:
CHORDATA/AVES	Pernis ptilorhynchus	Oriental Honey-buzzard				National Protection Class:
CHORDATA/AVES	Phalacrocorax pelagicus	Pelagic Cormorant				National Protection Class:
CHORDATA/AVES	Platalea leucorodia	Eurasian Spoonbill	11	2012	0.11	National Protection Class:
CHORDATA/AVES	Podiceps auritus	Horned Grebe	1	2013	0.01	National Protection Class:
CHORDATA/AVES	Podiceps grisegena	Red-necked Grebe	5	2012-2013	0.012	National Protection Class:
CHORDATA/AVES	Strixuralensis	Ural Owl				National Protection Class:
CHORDATA/AVES	Tetrastes bonasia	Hazel Grouse				National Protection Class:

# 4.4 - Physical components

# 4.4.1 - Climate

Climatic region	Subregion
D: Moist Mid-Latitude climate with cold winters	Dwb: Humid continental (Humid with severe, dry winter, warm summer)

# 4.4.2 - Geomorphic setting

The Country of the Country	
a) Mnimum elevation above sea level (in metres) 59	
a) Maximum elevation above sea level (in metres) 81	
Entire river basin	
Upper part of river basin ☐	
Middle part of river basin ☐	
Lower part of river basin	
More than one river basin ☑	
Not in river basin ☐	
Coastal	
Please name the river basin or basins. If the site lies in a sub-basin, please	also name the larger river basin. For a coastal/marine site, please name the sea or ocean.
In the southeast of Muleng river basin and in the north of the	Kingkai Lake basin in China

# 4.4.3 - Soil



Please provide further information on the soil (optional)

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

#### 4.4.4 - Water regime

#### Water permanence

Presence?	Changes at RIS update
Usually permanent water	
present	

#### Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from rainfall		No change
Water inputs from surface water	<b>2</b>	No change

#### Water destination

Presence?	Changes at RIS update
To downstream catchment	No change

#### Stability of water regime

Presence?	Changes at RIS update
Water levels fluctuating (including tidal)	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology.

Xingkai Lake is composed of a small lake (the Little Xingkai Lake) and a large one (the Great Xingkai Lake), and hold a water capacity of 0.3 billion m3. 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 km2. Originated from the Changbai Mountains, Muleng River flows into the Little Xingkai Lake through Dongdi River. With a drainage area of 36.4 thousand km2, the Great Xingkai Lake occupies 4 380 km2, 1 240 km2 of which belongs to China. The whole catchment area is 36.4 thousand km2. 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

4	4.5	<ul> <li>Sed</li> </ul>	iment	regi	me

Cignificant	accretion	or deposition	on of oo	dimonto	0001100	on f	ho cito	
Significant	accretion	or deposition	on ot sed	aiments	occurs	on tr	ne site	100

(Update) Changes at RIS update No change □ Increase ○ Decrease ○ Unknown ○

Sediment regime unknown

#### 4.4.6 - Water pH

## Circumneutral (pH: 5.5-7.4)

(Update) Changes at RIS update No change 

● Increase 

O Decrease 

O Unknown 

O

Alkaline (pH>7.4)

(Update) Changes at RIS update No change 

● Increase 

O Decrease 

O Unknown 

O

Unknown

Please provide further information on pH (optional):

•	
pH 6.5-8.5	

#### 4.4.7 - Water salinity

# Fresh (<0.5 g/l)

(Update) Changes at RIS update No change Increase O Decrease O Unknown O

Unknown

# 4.4.8 - Dissolved or suspended nutrients in water

Oligotrophic 🗹

(Update) Changes at RIS update No change 

● Increase 

O Decrease 

O Unknown 

O

Unknown

Please provide further information on dissolved or suspended nutrients (optional):

The Great Xingkai Lake has not been contaminated. 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.

#### 4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological  $% \left( 1\right) =\left( 1\right) \left( 1\right$ 

characteristics in the area surrounding the Ramsar Site differ from the  $\,$  i) broadly similar  $\,$   $\,$  ii) significantly different  $\,$   $\,$ 

site itsel

#### 4.5 - Ecosystem services

#### 4.5.1 - Ecosystem services/benefits

Provisioning Services

r tovisioning services		
Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	High
Fresh water	Drinking water for humans and/or livestock	High
Fresh water	Water for irrigated agriculture	High
Wetland non-food products	Other	

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High
Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	High
Erosion protection	Soil, sediment and nutrient retention	Medium
Pollution control and detoxification	Water purification/waste treatment or dilution	High
Climate regulation	Local climate regulation/buffering of change	High
Hazard reduction	Flood control, flood storage	High

#### Cultural Services

Oditoral Oct vices						
Ecosystem service	Examples	Importance/Extent/Significance				
Recreation and tourism	Recreational hunting and fishing	Low				
Recreation and tourism	Water sports and activities	Low				
Recreation and tourism	Picnics, outings, touring	Low				
Recreation and tourism	Nature observation and nature-based tourism	Low				
Spiritual and inspirational	Cultural heritage (historical and archaeological)	High				
Scientific and educational	Educational activities and opportunities	High				
Scientific and educational	Long-term monitoring site	High				
Scientific and educational	Major scientific study site	High				

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Accumulation of organic matter	Medium

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes O No ⊚ Unknown O

# 4.5.2 - Social and cultural values

i) the site provides 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

# Description if applicable

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) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland

#### Description if applicable

The Xinkailiu relic is located between the Large and Little Xingkai Lake, and it is the earliest neolithic site which has been discovered in Heilongjiang Province. There are the skeleton of Phalacrocorax carbo which is the earliest domesticated, the earliest primitive totem worshipfish carving of popular antler, Shamanism symbols - pottery head like, the biggest pit graves of fish and the earliest works of Art - ripple and ripple and so on.

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) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples

#### Description if applicable

The development of the wetland in Xingkai Lake Basin was from 1950s to 1990s with the area of 125 000 ha. The aim of it is mainly to solve the problem of national food. There are only 40000 ha of natural wetlands after the establishment of Xingkai Lake Nature Reserve. In recent years, with the developmental tourism of Xingkai Lake, the fishery has also been also damaged by overfishing.

iv) 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

# 4.6 - Ecological processes

<no data available>

# 5 - How is the Site managed? (Conservation and management)

# 5.1 - Land tenure and responsibilities (Managers)

#### 5.1.1 - Land tenure/ownership

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Category	Within the Ramsar Site	In the surrounding area
National/Federal government	<b>/</b>	<b>&gt;</b>
Local authority, municipality, (sub)district, etc.	<b>/</b>	

#### Private ownership

Category	Within the Ramsar Site	In the surrounding area
Cooperative/collective (e.g., farmers cooperative)		<b>2</b>

#### Provide further information on the land tenure / ownership regime (optional):

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.

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

# 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for	Bureau of Xingkai Lake National Nature Reserve, Heilongjiang
managing the site:	
Provide the name and title of the person or people with responsibility for the wetland:	Lixin Wang (Director)
people with responsibility for the wettand.	
	198 Hongqi Road Jiguan District, 158100
Postal address:	Jixi City
	Heilongjiang Province
	P.R. China
E-mail address:	xkhwlx@126.com

# 5.2 - Ecological character threats and responses (Management)

# 5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

Tourism and recreation areas Low impact Increase No change		Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
	Т			Low impact	<b>/</b>	increase		No change

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Livestock farming and ranching	Low impact			No change	<b>✓</b>	increase
Marine and freshwater aquaculture		Low impact	<b>2</b>	increase		increase

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified					<b>√</b>	

#### Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Household sewage, urban waste water		Low impact		No change	✓	No change
Industrial and military effluents		Low impact		No change	<b>2</b>	increase
Agricultural and forestry effluents	Low impact			No change	<b>2</b>	No change

Global legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
UNESCO Biosphere Reserve	Khanka Lake Biosphere Reserve	http://www.unesco.org/mabdb/br/b rdir/directory/biores.asp?code=C PR+28&mode=all	partly

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Nature Reserve in China	Xingkai Lake National Nature Reserve	http://124.205.185.3/publicfiles /business/htmlfiles/xkhbhq/index.html	partly

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Xingkai Hu Nature Reserve	http://www.birdlife.org/datazone /sitefactsheet.php?id=15369	partly

#### 5.2.3 - IUCN protected areas categories (2008)

la Strict	Moturo	Resense	

Ib Wilderness Area: protected area managed mainly for wilderness protection

II National Park: protected area managed mainly for ecosystem protection and recreation

III Natural Monument: protected area managed mainly for conservation of specific natural features

IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention

V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation

M Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

# 5.2.4 - Key conservation measures

#### Habitat

liabitat	
Measures	Status
Re-vegetation	Proposed

#### **Human Activities**

Measures	Status
Fisheries management/regulation	Implemented
Harvest controls/poaching enforcement	Implemented
Regulation/management of recreational activities	Partially implemented
Communication, education, and participation and awareness activities	Implemented
Research	Implemented

# 5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site?

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning Yes O No 

processes with another Contracting Party?

#### 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, but a plan is being prepared

# 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water regime monitoring	Implemented
Water quality	Implemented
Plant community	Implemented
Plant species	Implemented
Animal community	Implemented
Animal species (please specify)	Implemented
Birds	Implemented

# 6 - Additional material

#### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Jiang Zuofa. 1998. Fishery resources in Amur River & Ussuri River & Suifen River & Xingkai Lake. Northeast Forestry University Press.

Ji Zhongguang, Wu Mingguan. 2006. Investigation of water resource's exploitability in Xingkai Lake inside of national boundaries. Heilongjiang Science and Technology of Walter Conservancy, 34(2): 47-49.

Li Wenfa, Peng Kemei, Piao Renzhu. 1994. Wild animal resource and research of Xingkai Lake Nature Reserve. Northeast Forestry University

Mishan Almanac compilation committee. 1985. Mishan Almanac.

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Udvardy M. 1975. A Classification of the Biogeographical Provinces of the World. IUCN Occasional Paper No. 18.

Wang Fengkun, Liu Huajin, Feng Shangzhu. 2005. Cranes in Xingkai Lake Wetland in China and Russia during 2005. Chinese Wildlife, 27(6): 27-29.

Wang Xianpu, Yu Shunli, Liu Zhenjie. 2005. Xingkai Lake Reserve in Heilongjiang Province, its main features and effective management. Chinese Wildlife, 27(2): 29-32.

1988. Diagnosis analysis of environmental problem in Xingkai Lake and its drainage basin. Chinese Research Academy of Environmental

2008. General plan of Xingkai Lake National Natural Reserve.

#### 6.1.2 - Additional reports and documents

i, taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<1 file(s) uploaded>

ii. a detailed Ecological Character Description (ECD) (in a national format)

iii. a description of the site in a national or regional wetland inventory

iv. relevant Article 3.2 reports

v. site management plan

vi. other published literature

#### 6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



the nature landscape of the wetland in summer ( the reserve, 26-05-2010 )



waterfowls in the site (the reserve, 24-04-2011)



the nature landscape of the wetland in winter ( the reserve, 05-11-2010 )



waterfowls in the site (the reserve, 14-07-2014)

# 6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 2002-11-01