



Ramsar Information Sheet

Published on 11 April 2023

China

Heilongjiang Grand Khingan Shuangheyuan Wetlands



Designation date	28 October 2022
Site number	2513
Coordinates	52°03'25"N 125°33'54"E
Area	8 712,00 ha

RIS for Site no. 2513, Heilongjiang Grand Khingan Shuangheyuan Wetlands, China

Created by RSIS V.1.6 on - 11 April 2023

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

Heilongjiang Grand Khingan Shuangheyuan Wetlands (hereinafter referred to as "Shuangheyuan Wetlands") are located in the temperate to cold-temperate transition zone, in the low mountainous hilly area between the Grand and Lesser Khingan Mountains in north-eastern China. As the Site is in the temperate to cold-temperate transition zone and has complex geography and vegetation, it has a typical composite ecosystem that consists of diverse forest vegetation, swamps, wetted areas, and meadows. The Site has inland wetland ecosystem with the cold-temperate coniferous forest-scrub marshes as the main conservation component. Situated in the southernmost part of the boreal coniferous forest region that stretches across the northern part of Eurasia, the Site is interspersed with cold-temperate bright coniferous forests dominated by Dahurian larch (*Larix gmelinii*) and temperate coniferous broad-leaved mixed forests dominated by *Betula platyphylla* and *Populus davidiana*. It is one of the completely preserved areas located in the transition zone from temperate broadleaf forest to cold temperate coniferous forest in China, which is typical to the biogeographic region and the cold coniferous forest area.

The Wolegen River, a secondary tributary of the Heilongjiang River, forms two tributaries in the site, the Inner and Outer Wolegen Rivers, with interlocking channels and abundant water resources. Due to the presence of seasonal permafrost, the flow of the rivers is obstructed, forming a wide riverbed and a variety of marsh wetlands. Forest marshes, scrub marshes and herbaceous marshes are mosaically distributed in the Site over 7656 hectares, accounting for 87.88% of the total area.

The site is rich in species diversity, with 432 species of vascular plants and 294 species of vertebrates, and is a hotspot of biodiversity in the biogeographic region. It provides important stopover and breeding habitats for birds along the East Asia - Australasia migration route. It has vulnerable species such as *Chosenia arbutifolia*, Siberian crane (*Grus leucogeranus*), Siberian musk deer (*Moschus moschiferus*), and the endangered species oriental stork. Overall, the Site is important for water conservation, flood prevention and storage, regulating the climate of the forest area, maintaining biodiversity, and ensuring water quality for the downstream Huma River and Heilongjiang River basin.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency	Administration Bureau of Heilongjiang Grand Khingan Shuangheyuan National Wetland Park
Postal address	Hanjiaoyuan Town 165123, Huma County, Heilongjiang Province, P.R. China

National Ramsar Administrative Authority

Institution/agency	Ramsar Administrative Authority of the People's Republic of China
Postal address	No.18 Hepingli East Road Dongcheng District Beijing 100714 P.R. China

2.1.2 - Period of collection of data and information used to compile the RIS

From year	2010
To year	2020

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Heilongjiang Grand Khingan Shuangheyuan Wetlands
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2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
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Former maps	0
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Boundaries description

The Site is located in the southeast slope of Grand Khingan Mountain of Huma County in Heilongjiang Province, with the boundary consistent with Heilongjiang Grand Khingan Shuangheyuan National Wetland Park. The western most point of the Site starts from two areas defined by the mouth of the rivers, Jialuo and Shiwuli. From there it comprises the Inner and Outer Wolegen Rivers and their overall floodplain areas covered with marshes. From Shiwuli River, the Site extends to north and east encompassing the wetland area, where the northern side is boarded by 8-1 branch Road to the intersection of Honghan Road and Beiou Road. The southern boundary from west to east is the southern edge of the flood plain and Hanfu branch Road.

2.2.2 - General location

a) In which large administrative region does the site lie?	Heilongjiang Province, P,R, China
b) What is the nearest town or population centre?	Hanjiaoyuan Town Huma County

2.2.3 - For wetlands on national boundaries only

- a) Does the wetland extend onto the territory of one or more other countries? Yes No
- b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes No

2.2.4 - Area of the Site

Official area, in hectares (ha):	8712
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Area, in hectares (ha) as calculated from GIS boundaries	8708.639
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2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Udvardy's Biogeographical Provinces	Temperate broad-leaf forests or woodlands, and subpolar deciduous thickets, Manchu-Japanese Mixed Forest Biogeographic Province, Palearctic Realm
Freshwater Ecoregions of the World (FEOW)	FEOW ID 617, Middle Amur

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

Hydrological services provided

The wetlands are crisscrossed with forests, rivers, marshes and meadows, and the water quality is better than the China's surface water environmental quality standard III, providing sufficient and clean water for the downstream Huma River and essential ecological support for the forests and other ecosystems along the way. The area of marsh wetlands distributed along the river bank is 7334 hectares, accounting for 95.79% of the Site. Scrub marsh is the main swamp type which is intermittently distributed on the edges of forest marshes and gully beaches, accounting for 55.37% of the wetland area. The forest marshes accounts for 20.48% of the wetland area and are well preserved and distributed like "islands" in the herbaceous marshes. The herbaceous marshes are distributed in the valley of the Wolegen River. These wetland types play an important role in ensuring hydrological and ecological security of the downstream Huma River and Heilongjiang River, as well as storing water and regulating floods.

Other ecosystem services provided

Due to the combination of hydrological, geomorphological and climatic conditions, the Shuangheyuan Wetlands spatially reflects continuous successions of forest marshes to scrub marshes, then from scrub marshes to herbaceous marshes, then from herbaceous marsh to marsh meadow, and from marsh meadow to island forests. The distribution of these features are representative of the wetlands in the high latitudes of the northern hemisphere and have important conservation and scientific research values.

In addition, the Site is in the transition zone between the cold temperate zone and the north temperate zone, with low average annual temperature, low evaporation, and high water table. There are permanent and seasonal island frozen soil distributed in the wetland and a thick layer of peat in the forest swamp and shrub swamp soils, which have carbon sink functions and have a role in reducing atmospheric greenhouse gases emissions.

Other reasons

Shuangheyuan wetlands are located in the cold-temperate and temperate transition zone, between the Grand Khingan Mountains and Songnen Plain, and adjacent to the the Lesser Khingan Mountains. The zonal vegetation is dominated by cold-temperate bright coniferous forests Dahurian Larch (*Larix gmelinii*) forests, as well as mixed coniferous and broad-leaved forests and temperate broad-leaved forests. As it is in the southernmost part of the boreal coniferous forest distribution area, the temperate coniferous broad-leaved mixed forest and cold-tolerant broad-leaved forest within the Site are more than in the Jiuqushibawan National Wetland Park in the northern part of the Grand Khingan Mountains and "Inner Mongolia Grand Khingan Hanma Wetlands (Ramsar ID 2351)" in the northwest. The proportion of herbaceous marsh area has increased to 19.95%.

In the open river floodplain area between the Inner and Outer Wolegen River in the Site, the communities of dahurian larch (*Larix gmelinii*) forest, *Larix gmelinii* - *Betula platyphylla* mixed forest, *Betula platyphylla* and *Chosenia arbutifolia* forest are scattered in the scrub marshes and herbaceous marshes, which are primitive in nature and different from the wetland vegetation in the Great Khingan Mountains and even from other areas at the same latitude. The scrub marshes in the Site are distributed in terraces, river valleys and river floodplains, as well as the edges of forest marshes, with wet-loving shrubs such as *Betula fruticosa*, *Betula middendorffii* and common osier willow (*Salix viminalis*) as the dominant species, and *Rhododendron parvifolium*, sumpf-porst (*Ledum palustre*) and *Sphagnum squarrosum* as the associated species, which are the dominant wetland vegetation types in the Site. The scrub marshes account for more than 55% of the total wetland area, which is different from other wetlands in the Grand Khingan area.

Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information

The Shuangheyuan Wetlands provide excellent habitat for wildlife, support a variety of threatened species, and promote biodiversity conservation. There are three critically endangered species in the Site, namely, Baer's pochard (*Aythya baeri*), Siberian crane (*Grus leucogeranus*) and yellow-breasted bunting (*Emberiza aureola*), one endangered species, oriental stork (*Ciconia boyciana*), and ten vulnerable species, namely, *Chosenia arbutifolia*, horned grebe (*Podiceps auritus*), swan goose (*Anser cygnoides*), lesser white-fronted goose (*Anser erythropus*), white-naped crane (*Grus vipio*), greater spotted eagle (*Aquila clanga*), snowy owl (*Bubo scandiacus*), rustic bunting (*Emberiza rustica*), taimen (*Hucho taimen*), and Siberian musk deer (*Moschus moschiferus*). Among these species listed in the IUCN Red List, there are seven species under National Protection Class I and six species under Class II. See also Chapter 3.2 and 3.3 for more information.

Criterion 3 : Biological diversity

Justification

The Site is in the transition area between the cold-temperate coniferous forests of the Grand Khingan Mountains and the temperate mixed coniferous and broad-leaved forests of the Xiaoxinganling, with diverse habitat types, including low hills, valleys, meadows, rivers, scrub and herbaceous marshes, coniferous forests, mixed coniferous forest, and broad-leaved forests. The site is distributed with 12 families and 14 species of mosses, 7 families and 8 species of ferns, 1 family and 4 species of gymnosperms, 67 families and 406 species of angiosperms, including almost all the species of Siberian plant genera. It provides a good growing environment for rare plants such as *Chosenia arbutifolia*, *Fraxinus mandshurica*, and *Glycine soja*. *Sphagnum palustre* is widely distributed within the Site and is a key species of peat marshes.

The diverse natural wetland vegetation in the Site provides important habitat for 202 bird species, 39 mammal species, 6 amphibian species, 5 reptile species, and 42 fish species. It provides resting and breeding habitats for over 120 species of migratory birds such as oriental stork (*Ciconia boyciana*), the black stork (*Ciconia nigra*), white-naped crane (*Antigone vipio*), and Siberian crane (*Leucogeranus leucogeranus*), and provide food and habitat for threatened or endemic species such as black-billed capercaillie (*Tetrao urogalloides*), moose (*Alces alces*), and Siberian musk deer (*Moschus moschiferus*). It is also an important spawning and nursery site and a migratory path for endemic cold-water fishes such as *Brachymystax lenok* and *Hucho taimen*.

The population status of these species plays a key role in the formation, succession and ecological functions of various wetland types, and are of great importance in maintaining the stability of marsh and river ecosystems and the biodiversity of the biogeographic region.

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

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Plantae								
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Chosenia arbutifolia</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	VU	<input type="checkbox"/>	National Protection Class II	Crit 3: Rare Species

The Site is located between the cold temperate coniferous forest region of Grand Khingan Mountains and Songnen Plain in the cold-temperate and temperate transition zone, with complex natural geographic conditions and abundant plant species. The integrity of the wetland ecosystem can be effectively protected by preserving the existing natural wetland ecosystems of different types, typical vegetation communities and animals in the Site, providing a good growth environment for *Chosenia arbutifolia*.

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

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence ¹⁾	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
Others																	
CHORDATA/ MAMMALIA	<i>Moschus moschiferus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	National Protection Class I	Crit 3: Representative species
Fish, Mollusc and Crustacea																	
CHORDATA/ ACTINOPTERYGII	<i>Hucho taimen</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	National Protection Class II	Crit 3: Representative species
Birds																	
CHORDATA/ AVES	<i>Anser cygnoid</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input checked="" type="checkbox"/>	National Protection Class II	Crit 3: Rare species
CHORDATA/ AVES	<i>Anser erythropus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input checked="" type="checkbox"/>	National Protection Class II	Crit 3: Rare species
CHORDATA/ AVES	<i>Aquila clanga</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input checked="" type="checkbox"/>	National Protection Class I	Crit 3: Rare species
CHORDATA/ AVES	<i>Aythya baeri</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				CR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	National Protection Class I	Crit 3: Rare species
CHORDATA/ AVES	<i>Bubo scandiacus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	National Protection Class II	Crit 3: Representative species
CHORDATA/ AVES	<i>Ciconia boyciana</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				EN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	National Protection Class I	Crit 3: Rare species
CHORDATA/ AVES	<i>Emberiza aureola</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				CR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	National Protection Class I	Crit 3: Rare species
CHORDATA/ AVES	<i>Emberiza rustica</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>		Crit 3: Rare species
CHORDATA/ AVES	<i>Grus leucogeranus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				CR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	National Protection Class I	Crit 3: Rare species
CHORDATA/ AVES	<i>Grus vipio</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input checked="" type="checkbox"/>	National Protection Class I	Crit 3: Rare species
CHORDATA/ AVES	<i>Podiceps auritus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	National Protection Class II	Crit 3: Rare species

1) Percentage of the total biogeographic population at the site

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

Shuangheyuan Wetlands is located in the biome of temperate broad-leaf forests or woodlands, and subpolar deciduous thickets of the Manchu-Japanese Mixed Forest Biogeographic Province in the Palaearctic Realm. With a humid continental climate, the Site is cold and dry in winter and warm in summer, with an average altitude of about 350m. It belongs to the upper reaches of the Heilongjiang basin, and the soil is mainly dark brown soil and brown coniferous forest soil. It has cold-temperate coniferous forest and shrub marsh wetland ecosystems in the transition zone of the Grand and Lesser Khingan Mountains, including scrub wetlands, peat forest marshes, permanent freshwater herbaceous marshes and permanent rivers, with scrub wetlands as the dominant type.

Forest marshes consist of coniferous forest swamp and broadleaf forest swamp wetlands, which are located in depressions on both sides of the river gullies with flat, low-lying and poorly drained terrain. The coniferous forest marshes include *Larix gmelinii*-*Betula fruticosa*-*Carex* spp. marshes, *Larix gmelinii*-*Betula fruticosa*-*Vaccinium uliginosum*-*Sphagnum palustre* marshes, *Larix gmelinii*-*Sumpf-Porst* (*Ledum palustre*)-*Sphagnum palustre* marshes, and other communities. The broadleaf forest marshes include *Betula platyphylla*-*Carex* spp. marshes and *Alnus sibirica*-*Carex* spp. marshes. Forest marshes and montane forests together provide sufficient water, food and suitable habitat for forest animals such as Siberian musk deer (*Moschus moschiferus*), wolverine (*Gulo gulo*), brown bear (*Ursus arctos*), european otter (*Lutra lutra*) and eurasian lynx (*Lynx lynx*), and suitable nesting conditions for raptors such as snowy owl (*Bubo scandiacus*) and greater spotted eagle (*Clanga clanga*).

Scrub wetlands are freshwater marshes with scrub plants as the dominant community, consisting of *Betula fruticosa*-*Betula ovalifolia* marshes, *Spiraea salicifolia* marshes, and *Salix Rosmarinifolia* marshes. Scrub wetlands are widely distributed and spread throughout the gullies in the wetland park. *Betula fruticosa*-*Betula ovalifolia* scrub is mainly distributed alongside forest marsh wetlands on the high banks of rivers. The birch marshes with *Betula ovalifolia* and *Carex* spp. as co-dominant species are mainly located on river banks with a peat soil layer.

The herbaceous marshes are mainly composed of *Carex* spp. marshes, *Carex* spp.-*Deyeuxia angustifolia* marshes, and *Carex miyabei* marshes, mainly distributed in the gullies on both sides of the Wolegen River. The marshy meadow reflects a transition from a meadow to marshy vegetation, mostly distributed in high river floodplains and lowlands of low terraces. The scrub wetlands, herbaceous marshes, and marshy meadows are good water sources and feeding habitats for forest animals, and also provide important resting and breeding habitats for rare species such as oriental stork (*Ciconia boyciana*), white-naped crane (*Grus vipio*), mandarin duck (*Aix galericulata*), whooper swan (*Cygnus cygnus*), swan goose (*Anser cygnoid*), and horned grebe (*Podiceps auritus*).

As a typical cold-temperate coniferous forest scrub marsh wetland ecosystem in the transition zone of temperate and cold-temperate zones and in the transition zone of the Grand and Lesser Khingan Mountains, the Site plays a great role in soil and water conservation, climate regulation, surface runoff mitigation, and biodiversity maintenance.

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

Inland wetlands

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 >> M: Permanent rivers/ streams/ creeks		4	322	
Fresh water > Marshes on inorganic soils >> Tp: Permanent freshwater marshes/ pools		3	1527	
Fresh water > Marshes on inorganic soils >> W: Shrub-dominated wetlands		1	4239	Representative
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		2	1568	Representative

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Coniferous forest, mixed coniferous and broad-leaved forest	1056

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Betula fruticosa</i>	dominant species
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Betula pendula mandshurica</i>	dominant species
TRACHEOPHYTALILIOPSIDA	<i>Calamagrostis linifolia</i>	dominant species
TRACHEOPHYTALILIOPSIDA	<i>Carex miyabei</i>	dominant species
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Fraxinus mandshurica</i>	A second-class protected wild plant. It is widely distributed, but discontinuous, across northeast China, parts of northwest China, eastern Russia, northern Japan and North Korea. Among them, northeast China is the main and central distribution area of Fr
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Glycine max soja</i>	National Protection Class II
TRACHEOPHYTAPINOPSIDA	<i>Larix gmelinii</i>	dominant species
BRYOPHYTA/SPHAGNOPSIDA	<i>Sphagnum palustre</i>	dominant species

Optional text box to provide further information

There are four criteria for the selection of species in the List of Wild Plants under Key State Protection: 1, endangered species with very small number and narrow distribution range; 2, endangered and rare species with important economic, scientific and cultural values; 3, wild populations of important crops and related species with genetic value; 4, the species with important economic value, and resources are sharply reduced due to over-exploitation and utilization.

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	<i>Accipiter gentilis</i>				National Protection Class II
CHORDATA/AVES	<i>Accipiter nisus</i>				National Protection Class II
CHORDATA/AVES	<i>Accipiter virgatus</i>				National Protection Class II
CHORDATA/AVES	<i>Aix galericulata</i>				National Protection Class II
CHORDATA/AVES	<i>Alauda arvensis</i>				National Protection Class II
CHORDATA/MAMMALIA	<i>Alces alces</i>				critically endangered in Biodiversity Red List in China, and under National Protection Class I
CHORDATA/AVES	<i>Anas formosa</i>				National Protection Class II
CHORDATA/AVES	<i>Anser albifrons</i>				National Protection Class II
CHORDATA/AVES	<i>Aquila chrysaetos</i>				vulnerable in Biodiversity Red List in China, and under National Protection Class I
CHORDATA/AVES	<i>Arenaria interpres</i>				National Protection Class II
CHORDATA/AVES	<i>Asio flammeus</i>				National Protection Class II
CHORDATA/AVES	<i>Asio otus</i>				National Protection Class II
CHORDATA/ACTINOPTERYGII	<i>Brachymystax lenok</i>				National Protection Class II
CHORDATA/AVES	<i>Bubo bubo</i>				National Protection Class II
CHORDATA/AVES	<i>Buteo hemilasius</i>				vulnerable in Biodiversity Red List in China, and under National Protection Class II.
CHORDATA/AVES	<i>Buteo japonicus</i>				National Protection Class II
CHORDATA/AVES	<i>Buteo lagopus</i>				National Protection Class II
CHORDATA/MAMMALIA	<i>Canis lupus</i>				National Protection Class II
CHORDATA/AVES	<i>Carpodacus roseus</i>				National Protection Class II

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/MAMMALIA	<i>Cervus elaphus canadensis</i>				endangered in Biodiversity Red List in China, under National Protection Class I
CHORDATA/AVES	<i>Ciconia nigra</i>				vulnerable in Biodiversity Red List in China, and under National Protection Class I
CHORDATA/AVES	<i>Circus aeruginosus</i>				National Protection Class II
CHORDATA/AVES	<i>Circus cyaneus</i>				National Protection Class II
CHORDATA/AVES	<i>Circus melanoleucos</i>				National Protection Class II
CHORDATA/AVES	<i>Cygnus columbianus</i>				National Protection Class II
CHORDATA/AVES	<i>Cygnus cygnus</i>				National Protection Class II
CHORDATA/AVES	<i>Dryocopus martius</i>				National Protection Class II
CHORDATA/AVES	<i>Falco amurensis</i>				National Protection Class II
CHORDATA/AVES	<i>Falco subbuteo</i>				National Protection Class II
CHORDATA/AVES	<i>Falco tinnunculus</i>				National Protection Class II
CHORDATA/AVES	<i>Glaucidium passerinum</i>				National Protection Class II
CHORDATA/AVES	<i>Grus grus</i>				National Protection Class II
CHORDATA/MAMMALIA	<i>Gulo gulo</i>				endangered in Biodiversity Red List in China, under National Protection Class I
CHORDATA/AVES	<i>Ketupa flavipes</i>				endangered in Biodiversity Red List in China, under National Protection Class II
CHORDATA/MAMMALIA	<i>Lepus timidus</i>				National Protection Class II
CHORDATA/CEPHALASPIDOMORPHI	<i>Lethenteron reissneri</i>				National Protection Class II
CHORDATA/AVES	<i>Loxia curvirostra</i>				National Protection Class II
CHORDATA/AVES	<i>Luscinia calliope</i>				National Protection Class II
CHORDATA/AVES	<i>Luscinia svecica</i>				National Protection Class II
CHORDATA/MAMMALIA	<i>Lutra lutra</i>				endangered in Biodiversity Red List in China, under National Protection Class II
CHORDATA/MAMMALIA	<i>Lynx lynx</i>				endangered in Biodiversity Red List in China, under National Protection Class II
CHORDATA/AVES	<i>Lyrurus tetrix</i>				National Protection Class I
CHORDATA/MAMMALIA	<i>Martes zibellina</i>				vulnerable in Biodiversity Red List in China, and under National Protection Class I
CHORDATA/AVES	<i>Mergellus albellus</i>				National Protection Class II
CHORDATA/AVES	<i>Milvus migrans</i>				National Protection Class II
CHORDATA/AVES	<i>Ninox scutulata</i>				National Protection Class II
CHORDATA/AVES	<i>Numenius arquata</i>				National Protection Class II
CHORDATA/MAMMALIA	<i>Nyctereutes procyonoides</i>				National Protection Class II
CHORDATA/AVES	<i>Otus sunia</i>				National Protection Class II
CHORDATA/AVES	<i>Picoides tridactylus</i>				National Protection Class II
CHORDATA/AVES	<i>Strix uralensis</i>				National Protection Class II
CHORDATA/AVES	<i>Surnia ulula</i>				National Protection Class II

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	<i>Tetrao urogalloides</i>				endangered in Biodiversity Red List in China, under National Protection Class I
CHORDATA/AVES	<i>Tetrastes bonasia</i>				National Protection Class II
CHORDATA/MAMMALIA	<i>Ursus arctos</i>				vulnerable in Biodiversity Red List in China, and under National Protection Class II
CHORDATA/MAMMALIA	<i>Vulpes vulpes</i>				National Protection Class II
CHORDATA/AVES	<i>Zosterops erythropleurus</i>				National Protection Class II

Optional text box to provide further information

Wild animals have important ecological value. The State Council of the People's Republic of China has approved and issued the list of rare and endangered wild animals under national key protection, and the protection of these wild animals has been raised to the legal level.

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

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

- 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.

Shuangheyuan Wetlands are located in the Heilongjiang River basin, and the Wolegen River in the Site is a first-class tributary of the Huma River and a second-class tributary of the Heilongjiang River.

4.4.3 - Soil

- Mineral
- Organic
- No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes No

Please provide further information on the soil (optional)

The soils in the Site are mainly dark brown soils and brown coniferous forest soils, followed by bog soils, meadow soils and river bank forest soils. Brown coniferous forest soil is the main soil type, with a distribution area of more than 70%, mainly distributed in the range of 500-700 m above sea level. The dark brown soil is mainly distributed in the low hills, diffuse hills and small plains along the river.

4.4.4 - Water regime

Water permanence

Presence?	
Usually permanent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	
Water inputs from precipitation	<input checked="" type="checkbox"/>	No change
Water inputs from surface water	<input checked="" type="checkbox"/>	No change
Water inputs from groundwater	<input type="checkbox"/>	No change

Water destination

Presence?	
To downstream catchment	No change

Stability of water regime

Presence?	
Water levels largely stable	No change

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

The largest river in the site is the Wolegen River, which is a secondary tributary on the south bank of the Heilongjiang River, originating at the western foot of the Grand Khingan Fenghuanshan Mountain, flowing through the eastern part of Xinlin District and the northern part of Huma County in the Grand Khingan Mountains range, and injecting into the Huma River near Sanjianfang. The total length of the river and its tributaries is 136 km, of which 32.5 km flows through the wetland park, with a river width of 40 m, water depth of 1.5 m and a watershed area of 4431.7 ha. Increased precipitation and melting permafrost in summer affect wetland soil water content and surface water flow. The average annual runoff of the Wolegen River is 830 million cubic meters.

The groundwater in the site is continuous permafrost and island frozen layer upper water and frozen layer lower water. In terms of burial conditions, there is less stagnant water in the upper layer, mainly submerged and pressurized water, and the degree of groundwater storage is moderately weak.

4.4.5 - Sediment regime

- Significant erosion of sediments occurs on the site
- Significant accretion or deposition of sediments occurs on the site
- Significant transportation of sediments occurs on or through the site
- Sediment regime is highly variable, either seasonally or inter-annually
- Sediment regime unknown

4.4.6 - Water pH

- Acid (pH<5.5)
- Circumneutral (pH: 5.5-7.4)
- Alkaline (pH>7.4)
- Unknown

4.4.7 - Water salinity

- Fresh (<0.5 g/l)
- Mixohaline (brackish)/Mixosaline (0.5-30 g/l)
- Euhaline/Eusaline (30-40 g/l)
- Hyperhaline/Hypersaline (>40 g/l)
- Unknown

4.4.8 - Dissolved or suspended nutrients in water

- Eutrophic
- Mesotrophic
- Oligotrophic
- Dystrophic
- Unknown

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

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the i) broadly similar ii) significantly different site itself.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Low
Fresh water	Drinking water for humans and/or livestock	Medium
Fresh water	Water for irrigated agriculture	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High
Erosion protection	Soil, sediment and nutrient retention	High
Pollution control and detoxification	Water purification/waste treatment or dilution	High
Climate regulation	Local climate regulation/buffering of change	High
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climactic processes	High
Biological control of pests and disease	Support of predators of agricultural pests (e.g., birds feeding on locusts)	High
Hazard reduction	Flood control, flood storage	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	Low
Spiritual and inspirational	Inspiration	Medium
Spiritual and inspirational	Spiritual and religious values	Low
Spiritual and inspirational	Aesthetic and sense of place values	High
Scientific and educational	Educational activities and opportunities	High
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	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 microorganisms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Sediment retention	High
Soil formation	Accumulation of organic matter	High
Nutrient cycling	Carbon storage/sequestration	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	High
Pollination	Support for pollinators	High

Within the site:

Outside the site:

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

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
- ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland
- iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples
- 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

<no data available>

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

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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

The land of the site is all state-owned and managed by the Heilongjiang Grand Khingan Hanjiayuan Forestry Bureau.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Administration Bureau of Heilongjiang Grand Khingan Shuangheyuan National Wetland Park

Provide the name and/or title of the person or people with responsibility for the wetland:

Fuzhen Feng, Director

Postal address:

Hanjiayuan Town 165123, Huma County, Grand Khingan, Heilongjiang, P.R. China

E-mail address:

ffz2010ffz@163.com

5.2 - Ecological character threats and responses (Management)

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

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads	Low impact		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Gathering terrestrial plants	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fire and fire suppression	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Habitat shifting and alteration		Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Droughts	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Temperature extremes	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Wetland Park	Heilongjiang Grand Khingan Shuangheyuan National Wetland Park		whole

5.2.3 - IUCN protected areas categories (2008)

1a Strict Nature Reserve

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

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

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Catchment management initiatives/controls	Implemented
Habitat manipulation/enhancement	Implemented
Re-vegetation	Implemented
Land conversion controls	Implemented

Species

Measures	Status
Threatened/rare species management programmes	Implemented

Human Activities

Measures	Status
Management of water abstraction/takes	Implemented
Regulation/management of wastes	Implemented
Livestock management/exclusion (excluding fisheries)	Implemented
Fisheries management/regulation	Implemented
Harvest controls/poaching enforcement	Implemented
Regulation/management of recreational activities	Implemented
Communication, education, and participation and awareness activities	Implemented
Research	Implemented

Other:

Heilongjiang Grand Khingan Shuangheyuan National Wetland Park officially became a national wetland park in December 2017 and established a management organization in 2021, which is subordinate to Hanjiayuan Forestry Bureau. The bureau has improved the rules and regulations and equipped the management personnel. It has formulated 18 systems such as "Management Measures of Shuangheyuan National Wetland Park", "Wetland Park Management and Patrol System", and "Wetland Park Propaganda System" to ensure that all work is carried out efficiently.

The Bureau has set up two control stations at important road crossings, two iron gates to close the mountains and roads and three patrol and monitoring teams. We have also formed regular patrol and inspection mechanisms of key areas, bird habitats and major road crossings throughout the year to protect the ecological environment from human stressors. There is closely integrated wetland protection management with forest fire prevention and resource management.

In 2016, the Bureau carried out vegetation restoration in the alluvial gold over-mining area of 8.37 ha. and other activities such as dredging and reinforcement of siltation river banks, and pest control in the protection and conservation area of 8,138 ha.

The Bureau celebrates "World Wetland Day" and "Wetland Protection Publicity Month" and publishes wetland protection slogans and posters in public media to promote wetland protection laws and regulations and popular science knowledge. More than 300 wetland protection materials have been distributed, 58 signs were set up, 37 slogans were posted, and two exhibitions of wetland education were held to enhance the public's awareness for ecological protection.

5.2.5 - Management planning

Is there a site-specific management plan for the site? In preparation

Has a management effectiveness assessment been undertaken for the site? Yes No

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes No

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
Soil quality	Proposed
Plant community	Implemented
Plant species	Implemented
Animal community	Implemented
Animal species (please specify)	Implemented
Birds	Implemented

The Wetland Management Bureau has increased the frequency of patrols and monitoring and set up four management and monitoring stations in the wetland park for protection and monitoring. The Bureau has strengthened the investment in monitoring equipment, and purchased far-infrared cameras, drones, cameras, GPS, and computers to support the protection and monitoring work. Monitoring of permafrost, climate change impacts, and forest fires impacts are being implemented.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

[1] Chai, Ying. "The development of tourism in China is the most beautiful small town ecological thinking and analysis." *Forestry Economics* 36.6 (2014): 97-99.

[2] Li, Yanhong, et al. "Dynamic change analysis and development trend of forest resources in Hanjiayuan Forestry Bureau." *Inner Mongolia Forestry Investigation and Design* 42.2 (2019): 11-13.

[3] Liu, Jiang, et al. "Hydrogeological and environmental geological characteristics of the middle reaches of the Wolegen River in the Grand Khingan Mountains region." *Scientific and Technological Innovation* 62.6 (2017).

[4] Tan, Hongtao. "Status and conservation of wetland resources in Hanjiayuan Forestry Bureau." *Inner Mongolia Forestry Investigation and Design* 1(2006): 22-24.

[5] Wang, Hongjie, et al. "Analysis of botanical resources of the wetland nature conservation plot of the Wolegen River." *Inner Mongolia Forestry Investigation and Design* 38.2(2015): 82-83.

[6] Wang, Zhonglin, et al. "Landscape pattern in Hanjiayuan Forest Farm in 2010 based on RS & GIS." *Protection Forest Science and Technology* 1(2014): 39-41.

[7] Zhao, Yongxia. "Hanjiayuan Forestry Bureau's proposal to develop forest tourism industry." *Forestry Science & Technology* 38.2 (2013): 61-62.

[8] Udvardy, Miklos DF, and M. D. F. Udvardy. A classification of the biogeographical provinces of the world. Vol. 8. Morges: International Union for Conservation of Nature and Natural Resources, 1975.

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)

<no file available>

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

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

<no file available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Oriental Stork (Lanwen Mao, 30-05-2018)



Wetland landscape (Chao Shi, 11-07-2017)



Riverine wetlands and scrub wetlands (Chao Shi, 18-07-2017)



Golden Eagle (Chao Shi, 12-10-2022)



Great Grey Owl (Chao Shi, 30-05-2020)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation