

**Ramsar Information Sheet** 

Published on 11 April 2023

# China

## Guangxi Beihai Jinhaiwan Mangrove Wetlands



Designation date 28 October 2022 Site number 2508 Coordinates 21°24'28"N 109°12'E Area 1 357,80 ha

https://rsis.ramsar.org/ris/2508 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

The Site is located in the coastal area of Beibu Gulf in the South China Sea. It is in a staggered transition zone from land to sea, with geomorphological characteristics formed from marine accumulation. The Site mainly consists of offshore and coastal wetlands, including sandy beaches, gravel beaches, mangroves, estuarine waters, and intertidal mudflats. It lies in the intertidal zone with sandy and gravelly substrate and low organic matter content. The Site consists of a series of brackish and salt water wetlands, which have low anthropogenic interference. It is a representative coastal Mangrove wetland ecosystem in southern China.

There are seven species of native mangrove plants, covering 147 ha and dominated by the native gray mangrove (Avicennia marina) community. The Site is on the East Asia - Australasia migration route. It provides habitat for various threatened and migrating species, including great knot (Calidris tenuirostris) and black-faced spoonbill (Platalea minor). Due to the the geographical location, substrate features, habitat conditions, and the relatively low anthropogenic disturbance, this area provides an important spawning and nursery site for the only two species of horseshoe crabs in China, tri-spine horseshoe crab (Tachypleus tridentatus) and horseshoe crab (Carcinoscorpius rotundicauda). It is one of the critical horseshoe crab habitats in the Beibu Bay and maybe even the world as it provides shelter for reproduction and recovery of the endangered tri-spine horseshoe crab population.

The Site provides ecological services such as water purification, moisture regulation, microclimate regulation, and supports threatened species. It also provides regional flood storage, groundwater replenishment, water supply, and coastal zone protection. In 2021, the ecological restoration of Fengjiajiang Basin in Guangxi Beihai Coastal National Wetland Park was selected as one of the top cases of ecological restoration with Chinese characteristics in the "IUCN Nature-based Solutions China Typical Cases" jointly released by the Ministry of Natural Resources of China and IUCN.

## 2 - Data & location

- 2.1 Formal data
- 2.1.1 Name and address of the compiler of this RIS
  - Responsible compiler

Institution/agency	Guangxi Beihai National Wetland Park Management Office
	Wetland Park Scientific Research Monitoring Center
	1km west of the intersection of Nanzhu Blvd and Haijing Blvd
Destal address	Yinhai District 536000
Postal address	Beihai City
	Guangxi 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	2018
To year	2021

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or	Guangxi Beihai Jinhaiwan Mangrove Wetlands
Spanish)	

#### 2.2 - Site location

#### 2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps 0

#### Boundaries description

The Site is located in the Guangxi Beihai Binhai National Wetland Park, accounting for 67.6% of the total wetland park area. It includes three ecosystems: offshore and coastal wetlands, permanent rivers (Fengjiajiang River), and artificial wetlands (such as Liyu Di Reservoir). The Site includes the offshore and coastal wetlands of the wetland park, including the coastal mangroves from the estuary of Fengjiajiang River to Daguan Sha and the shallow sea area, which stretches north to the position about 150 m south of Haijing Blvd, overlaps with the boundary of the Wetland Park in the south, reaches Xicungang in the east, and reaches the estuary of Fengjiajiang River in the west.

#### 2.2.2 - General location

a) In which large administrative region does	Beihai City, Guangxi Zhuang Autonomous Region
b) What is the nearest town or population centre?	Yintan Town, Yinhai District

#### 2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other  $$_{\rm Yes}\,O_{\rm No}\,{\textcircled{o}}$$  countries?

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party?

#### 2.2.4 - Area of the Site

Official area, in hectares (ha): 1357.8

Area, in hectares (ha) as calculated from [1357.285] GIS boundaries

#### 2.2.5 - Biogeography

RIS for Site no. 2508, Guangxi Beihai Jinhaiwan Mangrove Wetlands, China

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Udvardy's Biogeographical Provinces	Tropical humid forests, South Chinese Rainforest Biogeographic Province, Indomalayan 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

Hydrological services provided	Jinhaiwan Mangrove Wetlands is located in the south of Beihai City. It is mainly composed of offshore and coastal wetlands, including the coastal mangroves from the estuary of Fengjiajiang River to Daguansha and shallow sea areas. The wetland types includes mangroves, sandy beaches, muddy beaches and estuarine waters. The major water sources consists of tides, freshwater streams, and atmospheric precipitation. The tidal pattern of the sea area is all-day tide, with an average tide level of 2.51m, a maximum tide level of 6.06m, a minimum tide level of -0.06m, a maximum flow rate of 0.23m/s at high tide and 0.45m/s at low tide. The primary wave direction of the sea area is southwest with an average wave height of 0.3m and a maximum wave height of 2m. Under these different hydrological conditions, the salinity from the coast to the shallow waters shows significant gradient variations which results in relatively regularly changing vegetation types, microbial communities, nutrient elements, dissolved oxygen, and physical and chemical properties of coastal wetland soils. This overall helps in forming an estuary and coastal mangrove ecosystem with ecological functions such as wind and wave prevention, siltation, beach preservation, and shore protection. It plays a vital role in maintaining the ecological balance and ecological security of Beihai City and the coast of Beibu Bay.
Other ecosystem services provided	The substrate of the Site is gravel, which is the most typical sandy mangrove ecosystem in China. It contains 11 species of true mangrove plants and eight semi-mangrove plants, among which the gray mangrove (Avicennia marina) group has the largest distribution area and is protogenic and representative to the Southern China Coast. Approximately 147 ha of mangrove forest forms a relatively unique community and successional process near the estuary and coast. This Site has high productivity and provides suitable habitats and abundant food for birds, lower plants, plankton and microorganisms, macrobenthos, and insects. In addition, mangroves in the Site have significant water purification value in the near-shore environment and shallow marine waters. The Site also facilitates the growth and reproduction of offshore fish by providing organic matter, breeding grounds, and shelter for those organisms.

☑ Criterion 2 : Rare species and threatened ecological communities

The Site is the habitat of many rare and threatened species, including two Critically Endangered (CR) species; spoon-billed sandpiper (Calidris pygmaea) and yellow-breasted bunting (Emberiza aureola); seven Endangered (EN) species; far eastern curlew (Numenius madagascariensis), great knot (Calidris tenuirostris), black-faced spoonbill (Platalea minor), spotted greenshank (Tringa guttifer), java sparrow (Lonchura oryzivora), big-headed reeves' turtle (Mauremys reevesii), and tri-spine horseshoe crab (Tachypleus tridentatus). The following 13 species are vulnerable (VU): Chinese Agarwood (Aguilaria sinensis), greater spotted eagle (Clanga clanga), fairy pitta (Pitta nympha), white-browed reed-warbler (Acrocephalus tangorum), eastern imperial eagle (Aguila heliacal), Saunders's gull (Chroicocephalus Optional text box to provide further saundersi), Chinese egret (Egretta eulophotes), black-legged kittiwake (Rissa tridactyla), Chinese cobra information (Naja atra), king cobra (Ophiophagus Hannah), common carp (Cyprinus carpio), Chinese soft-shelled turtle (Pelodiscus sinensis), and beauty snake (Orthriophis taeniurus).

The Site covers a complete wetland sequence from fresh water to saline water, and the wetland ecosystem is well preserved with high integrity. The special hydrology, soil and climate have bred complex and complete animal and plant communities, providing important wintering and resting places for the above-mentioned birds on the migration route of East Asia - Australasia migratory birds, as well as important spawning and breeding grounds for the only two species of horseshoe crabs in China, and also providing a good habitat for subtropical reptiles.

#### Criterion 3 : Biological diversity

Guangxi Beibu Bay is one of the major mangrove distribution areas in China. The mangroves in the Site are a vital plant group for maintaining the biodiversity of Beibu Bay in the South China Sea and South China. It is crucial for the reproduction and habitat of native mangrove species, water birds, and benthic animals. There are 11 species of true mangroves and eight species of semi-mangroves, such as gray mangrove (Avicennia marina), black mangrove (Aegiceras corniculatum), Kandelia obovata, black mangrove (Brugujera gymnorhiza), tonga mangrove (Lumnitzera racemose), red mangrove (Rhizophora stylosa), and blindingtree (Excoecaria agallocha).

#### Justification

A total of 401 species of vertebrates were found in the Site and its surroundings, including 32 species of fish, nine species of amphibians, 21 species of reptiles, 330 species of birds, and nine species of mammals. The common species of amphibians contain Duttaphrynus melanostictus, Fejervarya multistriata, and Microhyla fissipes. In the reptiles, snakes are common, with 13 species accounting for 61.90% of the number of reptile species. As a crucial part of the East Asia-Australasia international migratory bird route, there are many bird species in the Site, which is typical to the coastal area of the South China Sea and play an important role in maintaining regional species diversity. Mammals are dominated by small rodents, with a total of five species, accounting for 55.56% of the mammal species.

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

The Site has a large number of waterfowls staying and wintering here every year, which is an important wintering and resting place on the migration route from East Asia to Australasia. The diverse wetland habitats and rich food resources provide an important resting and wintering place for 111 species of wintering migratory birds, such as great knot (Calidris tenuirostris), Black-faced Spoonbill (Platalea minor), Saunders's Gull (Chroicocephalus saundersi), eurasian curlew (Numenius arquata), Grey-tailed Tattler (Tringa brevipes).

Optional text box to provide further information

The horseshoe crab is an ancient marine arthropod that appeared 450 million years ago and is known as a "living marine fossil". It inhabits the inner bay where water exchange is weak, and its juveniles live in the intertidal zone near the estuary for eight to ten years. They are highly dependent on environmental conditions in coastal areas and are considered indicator species for estuarine ecosystem health. Sandy substrates dominate the Site, and the rich sediments and biodiversity of the mangroves provide an essential guarantee for the growth and development of young horseshoe crabs. It is one of the few important habitats of horseshoe crab in the Beibu Bay waters. It inhabits the only two kinds of horseshoe crab in China, tri-spine horseshoe crab (Tachypleus tridentatus) and horseshoe crab (Carcinoscorpius rotundicauda). Based on monitoring data in 2021, the total number of juvenile tri-spine horseshoe crab (Tachypleus tridentatus) at all stages of its life history have high requirements on environmental characteristics, the Site, as an important spawning and nursery place for tri-spine horseshoe crab (Tachypleus tridentatus) in the Beibu Bay, is crucial to the survival of tri-spine horseshoe crab (Tachypleus tridentatus) population.

#### Criterion 6 : >1% waterbird population

Optional text box to provide further information

Based on monitoring data from 2018-2021, a total of three waterfowl species have more than 1% of their biogeographic population within the Site, namely the Charadrius alexandrinus, Calidris alba, and Charadrius leschenaultia. See 3.3 for details.

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	Acanthus ilicifolius		V		LC			True mangrove, the main species of mangrove forest
TRACHEOPHYTA/ MAGNOLIOPSIDA	Aegiceras corniculatum		<b>X</b>		LC			True mangrove, the main species of mangrove forest
TRACHEOPHYTA/ MAGNOLIOPSIDA	Aquilaria sinensis	<b>X</b>	×		VU		National Protection Class II	
TRACHEOPHYTA/ MAGNOLIOPSIDA	Avicennia marina		X		LC			True mangrove, the main species of mangrove forest
TRACHEOPHYTA/ MAGNOLIOPSIDA	Bruguiera gymnorrhiza		X					True mangrove, the main species of mangrove forest
TRACHEOPHYTA/ MAGNOLIOPSIDA	Excoecaria agallocha		V		LC			True mangrove, the main species of mangrove forest
TRACHEOPHYTA/ MAGNOLIOPSIDA	Kandelia obovata		V		LC			True mangrove, the main species of mangrove forest
TRACHEOPHYTA/ MAGNOLIOPSIDA	Laguncularia racemosa		V		LC			True mangrove, the main species of mangrove forest
TRACHEOPHYTA/ MAGNOLIOPSIDA	Lumnitzera racemosa		V		LC			True mangrove, the main species of mangrove forest
TRACHEOPHYTA/ MAGNOLIOPSIDA	Rhizophora stylosa		X		LC			True mangrove, the main species of mangrove forest
TRACHEOPHYTA/ MAGNOLIOPSIDA	Sonneratia apetala		×		LC			True mangrove, the main species of mangrove forest

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

Phylum	Scientific name	Species qualifies under criterion 2 4 6	9 3 5 7	S Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
Others	Others										
ARTHROPODA/ MEROSTOMATA	Carcinoscorpius rotundicauda						DD			National Protection Class II	Crit 3: Representative species; Crit4: inhabiting in this Site
CHORDATA/ AMPHIBIA	Duttaphrynus melanostictus						LC				Crit 3: Representative species;
CHORDATA/ AMPHIBIA	Fejervarya multistriata						DD				Crit 3: Representative species;
CHORDATA/ REPTILIA	Mauremys reevesii						EN			National Protection Class II	Crit 3: Representative species;
CHORDATA/ AMPHIBIA	Microhyla fissipes						LC				Crit 3: Representative species;
CHORDATA/ REPTILIA	Naja atra						VU				Crit 3: Representative species and endemic species;
CHORDATA/ REPTILIA	Ophiophagus hannah						VU			National Protection Class II	Crit 3: Representative species;

Phylum	Scientific name	Speci qualif unde criter 2 4	es c ies c er ion 6 9 3	Speci contrib unde criter	ies outes er rion 7 8	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ REPTILIA	Orthriophis taeniurus	ØO		200					VU				Crit 3: Representative species;
CHORDATA/ REPTILIA	Pelodiscus sinensis	ØO		200					VU				Crit 3: Representative species and endemic speices;
ARTHROPODA/ MEROSTOMATA	Tachypleus tridentatus	ZZ		800					EN			National Protection Class II	Crit 3: Representative species and endemic species; Crit4:Breeding in this Site
Fish, Mollusc a	and Crustacea											1	
ACTINOPTERYGI	Cyprinus carpio	ØO		200					VU				Crit 3: Representative species;
Birds									1			1	
CHORDATA/ AVES	Acrocephalus tangorum	ZZ		800					VU				Crit 3: Representative species and rare species; Crit4:Overwintering in this Site
CHORDATA/ AVES	Aquila clanga	ØD		200							1	National Protection Class 1	Crit 2: VU;Crit 3: Representative species and rare species;
CHORDATA/ AVES	Aquila heliaca	ZZ		800					VU	×	×	National Protection Class I	Crit 3: Representative species and rare species; Crit4:Overwintering in this Site
CHORDATA/ AVES	Calidris alba		ZOG	800		773	2018-2021	3.51	LC				Crit 3: Representative species; Crit4:Overwintering in this Site; Crit 6: 1 % threshold for rubida, E & SE Asia, Australia, New Zealand (non-bre) is 220 as of 2002.
CHORDATA/ AVES	Calidris pygmaea	ZZ		800					CR		×	National Protection Class I	Crit 3: Representative species and rare species; Crit4:Overwintering in this Site
CHORDATA/ AVES	Calidris tenuirostris	ZZ		800					EN		×	National Protection Class II	Crit 3: Representative species and rare species; Crit4:Overwintering in this Site
CHORDATA/ AVES	Charadrius alexandrinus		200	800		2109	2018-2021	3.01	LC				Crit 3: Representative species; Crit4: Breeding in the site; Crit 6: 1 % threshold for the population of alexandrinus, E Asia is 700 as of 2021 from EAAFP CSR 1.
CHORDATA/ AVES	Charadrius Ieschenaultii		ZOG	800		997	2018-2021	1.26	LC				Crit 3: Representative species; Crit 6: 1 % threshold for leschenaultii, SE Asia, Australia (non-bre) is 790 as of 2012.
CHORDATA/ AVES	Chroicocephalus saundersi	ZZ		800					VU		×	National Protection Class I	Crit 3: Representative species and rare species; Crit4:Overwintering in this Site
CHORDATA/ AVES	Egretta eulophotes	ØO		200							V	National Protection Class I	Crit 3: Representative species and rare species;
CHORDATA/ AVES	Emberiza aureola	ZZ		800					CR		×	National Protection Class	Crit 3: Representative species and rare species; Crit4:Overwintering in this Site
CHORDATA/ AVES	Lonchura oryzivora	ØO		200					EN				Crit 3: Representative species and rare species;
CHORDATA/ AVES	Numenius arquata			300					NT			National Protection Class II	Crit 3: Representative species; Crit4:Overwintering in this Site
CHORDATA/ AVES	Numenius madagascariensis	ZZ		800					EN		×	National Protection Class II	Crit 3: Representative species and rare species; Crit4:Overwintering in this Site
CHORDATA/ AVES	Pitta nympha	ØD		200					VU			National Protection Class II	Crit 3: Representative species and rare species;

Phylum	Scientific name	Species qualifies under criterion2469	Species contributes under criterion 3 5 7 8	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Platalea minor						EN		×	National Protection Class 1	Crit 3: Representative species and rare species; Crit4:Overwintering in this Site
CHORDATA/ AVES	Rissa tridactyla	ØOOO	ØOOO				VU				Crit 2: It's VU species in IUCN Redlist; Crit 3: Representative species and rare species;
CHORDATA/ AVES	Tringa guttifer	ØØ 🗆 🗆	ØOOO				EN	ø	×	National Protection Class	Crit 3: Representative species and rare species; Crit4:Overwintering in this Site

#### 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

Located in the Beibu Bay of the South China Sea, the Site is mainly composed of offshore and coastal wetlands. The wetland types include sand beach, gravel and pebble beach, intertidal forest wetland, estuarine waters, and intertidal mudflat, sand beach and salt flat. The mangrove forest is the essential component of the Site, mainly composed of sandy gray mangrove (Avicennia marina) communities distributed in the coastal zone and mangrove mixed communities in the Fengjiajiang estuary habitat. It is a key habitat for waterfowls, intertidal benthos and other animal groups, and is of great significance for maintaining biodiversity.

The mangrove forest in the intertidal forest wetland is dense, and the mangrove plants mainly include gray mangrove (Avicennia marina), black mangrove (Aegiceras corniculatum), Kandelia obovata. It is inhabited by black-crowned night-heron (Nycticorax nycticorax), Chinese pondheron (Ardeola bacchus), great egret (Ardea alba), etc. In the intertidal zone, the rich benthic life provides important feeding grounds for waterbirds such as great knot (Calidris tenuirostris), grey-tailed tattler (Tringa brevipes), and black-faced spoonbill (Platalea minor). Furthermore, the suitable sand and water flow in the intertidal mudflats provide suitable spawning grounds for Tri-spine Horseshoe Crab (Tachypleus tridentatus). Abundant benthic organisms provide food security for the growth of its larvae, making it an excellent nursery ground for Tri-spine Horseshoe Crab (Tachypleus tridentatus). Estuarine waters, with high heterogeneity of habitats, are the main habitats and breeding places for various aquatic animals, including common species such as spotted sardine (Clupanodon punctatus), picnic sea bream (Acanthopagrus berda), and Thryssa (Thryssa hamiltonii).

In addition, the Site also provides ecological services such as wave reduction and shore protection, material production, climate regulation, siltation and land reclamation, pollution retention, flood regulation and storage, water conservation, biodiversity protection, tourism, science and education. The total value of ecological services is estimated to be 136054000 Chines Yuan per year.

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

#### Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
E: Sand, shingle or pebble shores		1	1162.5	
F: Estuarine waters		3	45.3	Representative
G: Intertidal mud, sand or salt flats		4	2.4	
I: Intertidal forested wetlands		2	147.4	Representative

#### 4.3 - Biological components

#### 4.3.1 - Plant species

#### Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/MAGNOLIOPSIDA	Cerbera manghas	semi-mangrove plant
TRACHEOPHYTA/MAGNOLIOPSIDA	Clerodendrum inerme	semi-mangrove plant
TRACHEOPHYTA/MAGNOLIOPSIDA	Fagopyrum acutatum	National Protection Class II
TRACHEOPHYTA/MAGNOLIOPSIDA	Glycine max soja	National Protection Class II
TRACHEOPHYTA/MAGNOLIOPSIDA	Heritiera littoralis	semi-mangrove plant
TRACHEOPHYTA/MAGNOLIOPSIDA	Pluchea indica	semi-mangrove plant
TRACHEOPHYTA/MAGNOLIOPSIDA	Pongamia pinnata	semi-mangrove plant
TRACHEOPHYTA/MAGNOLIOPSIDA	Premna serratifolia	semi-mangrove plant
TRACHEOPHYTA/MAGNOLIOPSIDA	Talipariti tiliaceum	semi-mangrove plant
TRACHEOPHYTA/MAGNOLIOPSIDA	Thespesia populnea	semi-mangrove plant

#### 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/ACTINOPTERYGII	Acanthopagrus berda				Dominant species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	Accipiter badius				National Protection Class II
CHORDATA/AVES	Accipiter gentilis				National Protection Class
CHORDATA/AVES	Accipiter gularis				National Protection Class
CHORDATA/AVES	Accipiter nisus				National Protection Class
CHORDATA/AVES	Accipiter soloensis				National Protection Class
CHORDATA/AVES	Accipiter trivirgatus				National Protection Class
CHORDATAAVES	Accipiter virgatus				National Protection Class
CHORDATA/AVES	Ardea alba				Dominant species
CHORDATA/AVES	Ardeola bacchus				Dominant species
CHORDATA/AVES	Arenaria interpres				National Protection Class
CHORDATA/AVES	Asio flammeus				National Protection Class
CHORDATA/AVES	Aviceda jerdoni				National Protection Class
CHORDATA/AVES	Aviceda leuphotes				National Protection Class
CHORDATA/AVES	Butastur indicus				National Protection Class
CHORDATA/AVES	Buteo japonicus				National Protection Class II
CHORDATA/AVES	Centropus bengalensis				National Protection Class
CHORDATA/AVES	Centropus sinensis				National Protection Class II
CHORDATA/AVES	Ciconia nigra				National Protection Class
CHORDATA/AVES	Circus cyaneus				National Protection Class II
CHORDATA/AVES	Circus melanoleucos				National Protection Class
CHORDATA/AVES	Circus spilonotus				National Protection Class
CHORDATA/AVES	Cygnus columbianus				National Protection Class
CHORDATA/AVES	Cygnus cygnus				National Protection Class
CHORDATA/AVES	Dendrocygna javanica				National Protection Class
CHORDATA/AVES	Egretta sacra				National Protection Class
CHORDATA/AVES	Elanus caeruleus				National Protection Class
CHORDATAAVES	Falco amurensis				National Protection Class
CHORDATA/AVES	Falco peregrinus				National Protection Class

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	Falco subbuteo				National Protection Class II
CHORDATA/AVES	Falco tinnunculus				National Protection Class
CHORDATA/AVES	Fregata ariel				National Protection Class
CHORDATA/AVES	Garrulax canorus				National Protection Class
CHORDATA/AVES	Glaucidium brodiei				National Protection Class
CHORDATA/AVES	Glaucidium cuculoides				National Protection Class
CHORDATA/AVES	Gorsachius melanolophus				National Protection Class
CHORDATA/AVES	Halcyon smyrnensis				National Protection Class II
CHORDATA/AVES	Haliaeetus leucogaster				National Protection Class II
CHORDATA/AVES	Haliastur indus				National Protection Class
CHORDATA/AVES	Hieraaetus pennatus				National Protection Class
CHORDATA/AVES	Hirundapus cochinchinensis				National Protection Class
CHORDATA/AMPHIBIA	Hoplobatrachus rugulosus				National Protection Class
CHORDATA/AVES	Hydrophasianus chirurgus				National Protection Class
CHORDATA/ACTINOPTERYGII	Konosirus punctatus				Dominant species, synonym of Clupanodon punctatus
CHORDATA/AVES	Leiothrix lutea				National Protection Class
CHORDATA/AVES	Limicola falcinellus				National Protection Class
CHORDATA/AVES	Limnodromus semipalmatus				National Protection Class
CHORDATA/AVES	Luscinia calliope				National Protection Class
CHORDATA/AVES	Luscinia svecica				National Protection Class
CHORDATA/AVES	Merops philippinus				National Protection Class
CHORDATA/AVES	Merops viridis				National Protection Class
CHORDATA/AVES	Milvus migrans				National Protection Class
CHORDATA/AVES	Ninox scutulata				National Protection Class II
CHORDATA/AVES	Nycticorax nycticorax				Dominant species
CHORDATA/AVES	Otus lettia				National Protection Class
CHORDATA/AVES	Otus spilocephalus				National Protection Class
CHORDATA/AVES	Otus sunia				National Protection Class II

RIS for Site no. 2508, Guangxi Beihai Jinhaiwan Mangrove Wetlands, China

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	Pandion haliaetus				National Protection Class
CHORDATA/AVES	Pernis ptilorhynchus				National Protection Class
CHORDATA/AVES	Pitta moluccensis				National Protection Class
CHORDATA/AVES	Platalea leucorodia				National Protection Class
CHORDATA/AVES	Plegadis falcinellus				National Protection Class
CHORDATA/AVES	Rhinomyias brunneatus				National Protection Class II
CHORDATA/AVES	Spilornis cheela				National Protection Class II
CHORDATA/AVES	Thalasseus bergii				National Protection Class II
CHORDATAACTINOPTERYGII	Thryssa hamiltonii				Dominant species
CHORDATA/AVES	Zosterops erythropleurus				National Protection Class

#### 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
C: Moist Mid-Latitude climate with mild winters	Cfa: Humid subtropical (Mild with no dry season, hot summer)

#### 4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)	0
a) Maximum elevation above sea level (in metres)	8
	Entire river basin
	Upper part of river basin 🗖
	Middle part of river basin $\square$
	Lower part of river basin 🗖
	More than one river basin $\Box$
	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.

Beibu Bay, South China Sea

#### 4.4.3 - Soil

Mineral 🗹	
Organic 🜌	
No available information $\Box$	
Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)?	٥

Please provide further information on the soil (optional)

The soil-forming parent material of the Site is gravel, sand, and claystone, with an average soil bulk of 1.62 g per cubic centimeter, total porosity of 39.20%, and non-capillary pores of 10.66%. The soil-forming parent material of the terrace is shallow marine sediment and a few basaltic slope deposits. The zonal soil is humid-thermos ferralitic, and the non-zonal soil is solonchaks, mainly located at the confluence of the bay and estuary. The mangrove soil is called coastal solonchaks, rich in organic matter and sulfate ions, with acidity, and the profile is mostly dark gray.

#### 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		No change
	Water inputs from surface water		No change
	Marine water	1	No change

#### Water destination

Fresence:	
Marine	No change

#### Stability of water regime

Presence?	
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.

The annual average water temperature of the sea water in the Site is 23.7°C. The annual average salinity is 28.02‰ (August is the month with the most rainfall and runoff throughout the year, and the average salinity is 24.89‰), with the maximum daily salinity of 35.4 ‰ for many years. There is only one high tide and low tide in the Site every day. The tide pattern in the sea area is diurnal tide, with an average tide level of 2.51 meter, a maximum tide level of 6.06 meter and a minimum tide level of -0.06 meter. Maximum flow rate is 0.23 meter/second at rising tide and 0.45 meter/second at falling tide. The main wave direction of the sea is southwest, with an average wave height of 0.3 meter and the maximum wave height of 2 meter.

#### 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 □

Please provide further information on pH (optional):

The monitoring results in 2018 showed that the pH value of the wetland surface water is 6.91-8.32, which is generally weakly alkaline.

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 🗖

Please provide further information on salinity (optional):

The monitoring results in 2018 showed that the annual average salinity of the wetland is 28.02 ‰, with a daily maximum of 35.4 ‰ in many year. The flood season is from May to October. The average salinity of each month is 24.69-29.65 ‰. The lowest salinity is in August, with an average of 24.89 ‰.

RIS for Site no. 2508, Guangxi Beihai Jinhaiwan Mangrove Wetlands, China

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 site itself:	roadly similar ${\sf O}$ ii) significantly different $\widehat{oldsymbol{ iny}}$
Surrounding area has greater urbanisation or development $\Box$	
Surrounding area has higher human population density $\Box$	
Surrounding area has more intensive agricultural use $\Box$	
Surrounding area has significantly different land cover or habitat types ${oldsymbol arsigma}$	
Please describe other ways in which the surrounding area is different:	
The Site is mainly composed of mangroves and mudflats, su	rrounded by farmland, sea area, and urban land.

## 4.5 - Ecosystem services

#### 4.5.1 - Ecosystem services/benefits

Regulating Services				
Ecosystem service	Examples	Importance/Extent/Significance		
Erosion protection	Soil, sediment and nutrient retention	High		
Pollution control and detoxification	Water purification/waste treatment or dilution	High		
Climate regulation	Local climate Ilation regulation/buffering of High change			
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climactic processes	Medium		
Biological control of pests and disease	ol of pests ase Support of predators of agricultural pests (e.g., birds feeding on locusts)			
Hazard reduction	Coastal shoreline and river bank stabilization and storm protection	High		

Cultural Services

Ecosystem service	Ecosystem service Examples	
Recreation and tourism	Nature observation and nature-based tourism	Low
Spiritual and inspirational	Spiritual and inspirational Inspiration	
Spiritual and inspirational	Contemporary cultural significance, including for arts and creative inspiration, and including existence values	Medium
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	

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	Sediment retention	High	
Soil formation	Accumulation of organic matter	High	
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	High	
Nutrient cycling	Carbon storage/sequestration	High	
Pollination	Support for pollinators	Medium	

What is the Site like?, S4 - Page 6

Within the site:	0
Outside the site:	300000

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

Where economic studies or assessments of economic valuation have been undertaken at the site, it would be helpful to provide information on where the results of such studies may be located (e.g. website links, citation of published literature):

The total value of the ecological service function of the Site is assessed to be RMB 136.054 million per year, with a unit area value of RMB 70,622/ha. The direct utilization value is RMB 38.717 million, accounting for 28.4% of the total value, and the indirect utilization value is RMB 97.337 million, accounting for 71.6% of the total value.

The estimation results of each principal service function value are a material production value of RMB 28.863 million, tourism, science, and education value of 9.854 million yuan, climate regulation value of 6.483 million yuan, biodiversity value of 4.288 million yuan, pollution reduction and purification value of 49.632 million yuan, flood storage value of 10.471 million yuan, and water conservation value of 26.463 million yuan.

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  $\swarrow$  civilizations that have influenced the ecological character of the wetland

#### Description if applicable

The area where the wetland park is located has rich wetland cultural resources, including the famous "Nanzhu" culture, the ancient "Maritime Silk Road" culture, the Dan family culture with rich customs, and the devout marine religious culture. The Danjia culture is the central culture that affects the ecological characteristics of wetlands. The Dans means water residents. They take the sea as their companion, the boat as their home, and the fishing as their business. They fight with the wind and waves all year round and feed on the sea. The dangerous residence environment and unique livelihood make industrious, brave, optimistic, and open-minded fishermen to form their unique folk customs in the long-term conquest of the sea.

iii) the ecological character of the wetland depends on its interaction 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

#### 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	V	V			
Private ownership					
Category	Within the Ramsar Site	In the surrounding area			
Cooperative/collective (e.g., farmers cooperative)	V				

#### 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:	Guangxi Beihai Binhai National Wetland Park Management Office
Provide the name and/or title of the person or people with responsibility for the wetland:	Guo Guo, Director
Postal address:	Wetland Park Scientific Research Monitoring Center 1km west of the intersection of Nanzhu Blvd and Haijing Blvd Yinhai District 536000 Beihai City Guangxi Province P.R.China
E-mail address:	bhsdgy@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)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Tourism and recreation areas		Low impact		V

#### Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Drainage		Low impact		×
Water abstraction		Low impact		×

#### Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Marine and freshwater aquaculture		Low impact		Ø

#### Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads	Low impact			s and a second s
Shipping lanes		Low impact		J.

Biological resource use					
	Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
	Fishing and harvesting aquatic resources		Low impact	×	×

#### 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		×	V

#### Climate change and severe weather Factors adversely Actual threat Pote

affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Temperature extremes	Low impact		×	×

How is the Site managed?, S5 - Page 1

#### 5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	<b>Overlap with Ramsar Site</b>
National Wetland Park	Guangxi Beihai Binhai National Wetland Park		partly

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

la 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
Soil management	Partially implemented
Improvement of water quality	Implemented
Land conversion controls	Partially implemented
Habitat manipulation/enhancement	Partially implemented
Hydrology management/restoration	Partially implemented
Re-vegetation	Partially implemented
Catchment management	Implemented

#### Species

Measures	Status	
Control of invasive alien plants	Partially implemented	
Control of invasive alien animals	Proposed	
Threatened/rare species management programmes	Partially implemented	

#### Human Activities

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

#### Other:

The Site became the first National Wetland Park in Guangxi in 2016, and the management agency is Guangxi Beihai Binhai National Wetland Park Management Office. After more than ten years of construction, the wetland park has developed significantly, forming a set patrol management system with clear responsibilities for various departments. In addition, the Beihai Government promulgated the Guangxi Beihai Binhai National Wetland Park Management Measures (for Trial Implementation). So, wetland park management has a law to follow. In the Site, 12 hectares of ponds were returned to the beach, semi-mangrove plants were planted to enrich plant community structure and biodiversity, and the wetland ecosystem and bird habitat environment were significantly improved. 27.7 kilometers of interceptor pipes were laid to collect sewage at the nearest sewage treatment plant.

Publicity signs and cultural and educational galleries were provided within the Park to show the public about wetland protection and restoration and plant and animal resources. From 2016 to 2021, on average, more than 30 publicity activities were held every year for surrounding communities, the public, primary and secondary school students, etc., to popularize wetland protection knowledge, and more than 3000 people directly participated in the activities. In addition, the Site actively used the Wechat official account, wetland China net, and other platforms to publish about 700 pieces of public information and distribute about 10,000 copies of wetland publicity materials.

#### 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 O No logo

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

The wetland park has built scientific research and monitoring infrastructures such as mangrove experiment rooms, ecological monitoring and management rooms and purchased various scientific research and monitoring and experimental equipments. The management office organized some ecological monitoring, built artificial wetland mini-habitats and mangrove simulation habitats.

In 2020, the Wetland Park Management Office became the National Innovation Alliance for Mangrove Protection and Restoration director unit and the Asia Pacific Limulus Observatory Network Program member unit. At the same time, the Site actively cooperated with the Fourth Institute of Oceanography of the Ministry of Natural Resources, Guangxi Forestry Research Institute, Guangxi Mangrove Research Center, and other scientific institutions to carry out the protection and sustainable use of mangrove marine ecology Scientific research work.

## 6 - Additional material

### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Beibu Bay University. 2021. Investigation and monitoring report on young horseshoe crab population resources in wetland park. Guangxi Mangrove Research Center. 2020. Report on Health Assessment and Monitoring Project of Typical Mangrove Communities in Guangxi Beihai Coastal National Wetland Park.

Guangxi Mangrove Research Center. 2017-2019. Beihai Wetland Park Bird Monitoring Report.

Guangxi Biodiversity Research and Protection Association (Natural Beauty), Haikou Duotian Wetland Research Institute, South China Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences. 2020. Beibu Bay Coastal Wetland Biodiversity Public Monitoring Report and Protection Suggestions.

Guangxi Association for Biodiversity Research and Conservation. 2014-2019. Public Monitoring Report on Biodiversity of Coastal Wetlands in Guangxi Beibu Bay

Guangxi Association for Biodiversity Research and Conservation. 2020-2021. Report on Migratory Waterbirds in Beihai.

National Forestry Administration Bureau of Central South Forestry Survey Planning and Design Institute. 2016. Guangxi Beihai Binhai National Wetland Park Master Plan (2010-2020) (Revision).

Wen Chen, Ya Wu, ect. 2022. Spatial and Temporal Distribution of Nitrogen and Phosphorus Nutrients in Surface Water of Fengjiajiang River Watershed, Beihai. Safety and Environmental Engineering.

Wen Chen, Shaowen Yu, ect. 2020. Preliminary Study of Contamination Characteristics in Surface Water and Groundwater of Fengjiajiang River, Beihai City, Guangxi. Geology and Mineral Resources of South China.

Qiuxiang Deng, Guo Guo, ect. 2022. Investigation and Analysis on Mangrove Plant Communities in Guangxi Beihai Coastal National Wetland Park. Guangxi Forestry Science

Guo Guo, Song Yang, ect. 2018. Current situation and countermeasures of mangrove resources in Guangxi Beihai Binhai National Wetland Park. Low Carbon World.

Xuesong Huang. 2014. Climate change and its influence in Beibu Gulf mangrove biome of Guangxi in past 60 years. Acta Ecologica Sinica. Shilong Liu, Xudong Qin, ect. 2019. Structure and Diversity of Macrozoobenthic Communities in Intertidal Zone with Mangrove Forest in Fengjiajiang Estuary, Beihai City in Summer in 2017. Wetland Science.

Simin Rong. 2022. Comparative analysis and evaluation of water quality in the sea area adjacent to the estuary of Fengjiajiang River. Scientific and Technological Innovation.

Guangjun Wang. 2014. Evaluation on ecosystem service function of Guangxi Beihai Binhai National Wetland Park. China Market. Kwan KY, Fu YJ, Zhong MF, et al.. 2022. Spatiotemporal distribution of Asian horseshoe crab eggs Are highly intermingled with anthropogenic

structures in northern Beibu Gul

Catalog of Wildlife under Key State Protection. 2021. http://www.gov.cn/xinwen/2021-02/09/content\_5586227.htm.

List of Wild Plants under Key State Protection. 2021. http://www.gov.cn/zhengce/zhengceku/2021-09/09/content\_5636409.htm.

#### 6.1.2 - Additional reports and documents

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

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

<no file available>

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

Please provide at least one photograph of the site





iangxi





Mangrove (Guangxi Beiha ent Office, 12-07



Charadrius alexandrinus ( Guangxi Beihai Binhai National Wetland Park ent Office, 05-11



Calidris alba ( G Beihai Binhai National Wetland Park Management Office, 29-11-2016 )



water birds ( Guangxi Beihai Binhai National Wetland Park Management Office, 24-10-2022 )



6.1.4 - Designation letter and related data

Designation letter

Date of Designation 2022-10-28