



# Ramsar Information Sheet

Published on 11 April 2023

## China

### Guangdong Guangzhou Haizhu Wetlands



Designation date	28 October 2022
Site number	2504
Coordinates	23°04'N 113°20'23"E
Area	751,35 ha

## 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

Haizhu wetland is a near-natural wetland ecosystem in the Pearl River Delta, located in the central urban area of Guangzhou and covering an area of 751.35 ha. Haizhu wetland has developed a unique compound wetland type, comprising mainly of agroforest wetlands and river systems, which is characteristic of wetland ecosystems built around historical agricultural communities in China. It functions as an essential supporting node for constructing ecological corridors in Guangdong, Hong Kong, and Macao. The diverse habitat types of Haizhu wetland sustain numerous migratory birds and other organisms. There are 835 vascular plants, 736 insects, 8 amphibians, 22 reptiles, 187 birds, 8 mammals, and 64 fishes. There are 4 endangered species listed in the IUCN Red List in the wetland. Most of the fishes in Haizhu wetland are indigenous species while 16 are endemic to China. Among them, *Microphysogobio elongate* and *Salanx chinensis* are endemic to the Pearl River system. Haizhu wetland has made remarkable achievements in wetland conservation and management which is exemplary for managing urban wetlands. In 2015, The Management Protocols of Guangzhou Haizhu National Wetland Park was promulgated. In 2018, the Government of Guangzhou officially implemented the Guangzhou Wetland Conservation Regulations, which provided the wetlands a permanent conservation status in China.

## 2 - Data & location

### 2.1 - Formal data

#### 2.1.1 - Name and address of the compiler of this RIS

##### Responsible compiler

Institution/agency	Guangzhou Haizhu Wetland Management Office
Postal address	168 Xin Jiao Zhong Road, Haizhu District 510220, Guangzhou, Guangdong, 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	2015
To year	2020

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Guangdong Guangzhou Haizhu Wetlands
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## 2.2 - Site location

### 2.2.1 - Defining the Site boundaries

b) Digital map/image  
<1 file(s) uploaded>

Former maps	0
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##### Boundaries description

Haizhu Wetlands is located in the southeast of Haizhu District of Guangzhou City. It is the southern end of the new central axis of Guangzhou City, facing Xinjiao Middle Road in the north, bounded by the western end of Haizhu Lake in the west, by the north bank of the Shiliugang River in the east, and by the boundaries of cities and towns such as Houjiao Community, Shuiji Community and Dasha Community in the south. The whole Site is contained in the Haizhu National Wetland Park, accounting for about 86.5% of the wetland park area. So, this Site is managed by Haizhu Wetland Management Office. However, its adjacent areas, such as villages, farmlands, and lands for other uses, are managed by other corresponding departments according to land planning. The geographical coordinates are 113 ° 18'44" ~ 113 ° 21'40" E, and from 23 ° 02'59" ~ 23 ° 04'53" N.

The Tuhua Village within the larger boundary of the Site is bounded by Shiliugang River in the north and Donghua Avenue in the southeast and by Tuhua Overpass in the west, is not included in the Site. Also, the Xiaozhou Village, defined by Huazhou Rd in the north and Xiaozhou Rd in the south, is not included in the Site. Some other small areas are not included in this Site. For example, the area boarded by Longtan Creek in the east, Shiliugang River in the north, and by Huanan Highway in its west; another area that is bordered by Longtan Creek in the south, Shiliugang River in the north, and by Huanan Highway in the west; another area that is bounded by Tuhua Creek in the west and Beltway in the south; and another area that is bordered by Huanan Highway in the west and by the Guangzhou Beltway in the south.

### 2.2.2 - General location

a) In which large administrative region does the site lie?	Haizhu wetland is in southern China, Haizhu District, Guangzhou City, Guangdong Province.
b) What is the nearest town or population centre?	By 2020, about 1.819 million permanent residents were in the Haizhu District of Guangzhou.

### 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):

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

## 2.2.5 - Biogeography

### Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
WWF Terrestrial Ecoregions	G200_NUM23: Southeast China-Hainan Moist Forests
Freshwater Ecoregions of the World (FEOW)	ECO_ID 763: tropical and subtropical floodplain rivers and wetland complexes

### 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

Haizhu wetland is located in the Haizhu District in southern Guangzhou city. The Site is in the lower reaches of the Pearl River, surrounded by its front and rear channels, on a central shoal near the Estuary Delta with a highly developed water network. It is a near natural wetland ecosystem complex composed of inner lakes, rivers, and trench-based semi-natural orchards, which is a representative wetland type in China's south subtropical river delta region. The Site is rich in water resources with 39 crisscrossing rivers and contains tens of kilometres of rivers and lake shorelines. Controlled by sluices, the water in the wetland is diverted from the Shiliugang river, which is connected to the Pearl River. The Site's hydrology is affected by the irregular semidiurnal tide of the Pearl River. Overall, the Site serves functions such as preventing floods, storing excessive water, regulating water levels, improving water quality, maintaining the hydrological balance of the Pearl River, and maintaining the wetland biodiversity of the delta area. It also breeds a delta estuary wetland with vibrant biodiversity and a unique Lingnan water village culture.

Other ecosystem services provided

(1) Provisioning Services  
From the agroforests and the area of Agricultural Cultural Heritage of "High-Ridge-and-Deep-Ditch Traditional Agricultural System," Haizhu wetland produces high-quality fruits such as litchi, longan, carambola, and yellow peel every year, sharing the harvests with local communities.

(2) Regulating Services  
The wetland and its complex river networks help alleviate the heat island effect (by 0.5 to 1°C) and improve the regional biodiversity. The average concentration of PM2.5 around the wetland is 25 µg / m3, which is about 20% lower than the average level of Guangzhou city.

(3) Supporting Services  
The restoration of Haizhu wetland has significantly improved its biodiversity, with the number of plant species increasing from 294 to 835, the number of bird species from 72 to 187, and the number of insect species from 66 to 736.

(4) Cultural Services  
The wetland community at Haizhu Wetlands inherited the tradition of Lingnan water village where the village practiced horticulture along the wetlands. The wetland communities carry out folk activities related to the practice and the mythical culture of the region. Some of these activities are Dragon Boat Festival, Cantonese opera, Cantonese embroidery, and traditional calligraphy and painting. In addition, the wetland officials have established a national CEPA school which has carried out more than 400 natural education activities and courses such as "citizen scientist" for 1.6 million people by engaging more than 200 schools, 100 enterprises, and 60 educational institutions. These activities have helped to improve the public's understanding of wetland conservation. Overall, the wetland ecosystem services of the Site have helped improve the GDP of its surrounding areas by four times.

Other reasons

During Song Dynasty (960-1279), the working people of the Pearl River Delta dug ditches for drainage and constructed agro-forested areas within the Delta to plant tropical fruit trees. This raised field agroforest wetland, supported by rainfall and water of the Delta River, helped mitigate floods in the low-lying area and enabled orchards plantation and fisheries, forming a valuable near-natural "Lingnan Raised Field Agroforest Wetland", which today is part of the region's cultural heritage. This also reflects the traditional knowledge of the region in drainage, irrigation, water utilization, and water transfers, which combines forestry, orchards, agriculture, and fishery.

- Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information

Six vulnerable, endangered or extremely endangered species listed in IUCN Red List were recorded in the Haizhu wetland. Among them, three species was extremely endangered, namely Yellow-breasted Bunting (*Emberiza aureola*, CR), Chinese stripe-necked turtle (*Mauremys sinensis*, CR), Big-headed turtle (*Platysternon megacephalum*, CR). There were 3 vulnerable species, Chinese softshell turtle (*Pelodiscus sinensis*, VU), Chinese Agarwood (*Aquilaria sinensis*, VU), and *Dalbergia odorifera* (VU). The Haizhu wetlands provide a suitable habitat for these threatened species. Especially as a scarce wetland resource in a busy metropolis, and the Haizhu wetlands support biodiversity even more significantly.

Criterion 7 : Significant and representative fish

Justification

There are 64 species of fish in the Haizhu wetland, most of which are indigenous. There are also 16 species endemic to China, of which *Microphysogobio elongata* and *Salanx chinensis* is endemic to the Pearl River system, thus playing an essential role in maintaining the biodiversity of the wetland in the Pearl River Delta. These fishes have close nutritional and functional relationships with plankton, benthos, and waterfowls in their different life cycle stages. For example, *Salanx chinensis* is a river-sea migratory fish, usually living in coastal waters. But during the reproductive period from summer to early winter, it swims back to the river to breed in salty or fresh water. It likes to live in the middle and upper layers of the water body, feeds on zooplankton, but also eats shrimp and juvenile fish. The life cycle of the *Salanx chinensis* fully reflects the wetland characteristics of the south subtropical River Delta, which is a mixture of saline and fresh water.

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
<b>Plantae</b>								
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Aquilaria sinensis</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VU	<input type="checkbox"/>		
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Dalbergia odorifera</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VU	<input type="checkbox"/>		

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								
<b>Others</b>																	
CHORDATA/ REPTILIA	<i>Mauremys sinensis</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				CR	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/ REPTILIA	<i>Pelodiscus sinensis</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/ REPTILIA	<i>Platysternon megacephalum</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				CR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	National Second- Class Protected Animal	
<b>Fish, Mollusc and Crustacea</b>																	
CHORDATA/ ACTINOPTERYGII	<i>Barbodes semifasciolatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Coilia grayii</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Culter recurviceps</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Hemibagrus guttatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				DD	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Megalobrama terminalis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Microphysogobio elongatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Osteochilus salsburyi</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Parabramis pekinensis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Salanx chinensis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				DD	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Silurus asotus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Sinibrama macrops</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Sinibrama melrosei</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				DD	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Squalidus argentatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				DD	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Stolephorus chinensis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Tachysurus fulvidraco</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
CHORDATA/ ACTINOPTERYGII	<i>Xenocypris davidi</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Endemic species
<b>Birds</b>																	
CHORDATA/ AVES	<i>Emberiza aureola</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				CR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	National First- Class Protected Animal	

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

#### □ Ecological components

Geomorphology: The Site lies below 10 masl. It is divided into two geomorphological types: granite platform and alluvial plain.

Climate: The climate of Haizhu District belongs to the subtropical marine monsoon climate, with sufficient daylight, abundant rainfall, slight annual temperature difference, and pronounced dry and wet seasons.

Soil: The soil in the whole region can be categorized into paddy soil and fluvo-aquic soil, and further into three subtypes of retention paddy soil, fluvo-aquic soil, and wet fluvo-aquic soil.

Hydrology: Haizhu District is surrounded by the front and back channels of the Pearl River flowing from west to east. The water system is divided into six parts which altogether forms an interconnected water network system.

Wetland types: The Site is mainly composed of Raised Field Agroforest wetlands (384.1 ha), rivers (132.93 ha), and artificial wetlands, including ponds, ditches, and paddy fields with a total of 79.74 ha.

Plant community: The Site supports 835 higher vascular plants, including more than 60 indigenous plants and 107 wetland plants. Besides, there are 37 invasive plants.

Animal community: There are 1025 animals species in Haizhu wetland, including 736 insects, 8 amphibians, 22 reptiles, 187 birds, 8 mammals, and 64 fishes. There are also 114 zooplankton and 67 benthos.

#### □ Ecological process

Species migration and diffusion: Comparing the annual bird survey data of Haizhu wetland from 2016 to 2018, the birds diversity and their population dynamics change with seasons. From August, birds diversity and abundances increases monthly, reaching a peak from December to February, before gradually decreasing again.

Birds Breeding: There are 20 summer birds and 79 resident birds, meaning that breeding birds account for 51% of the total bird species.

Among the waterbirds, egret, night heron, and heron are dominant, followed by spotted-billed duck.

Hydrological change. The sources of Haizhu wetlands are tidal river branches and precipitation. The tides of the river branches are irregular semidiurnal, and the annual average tide range is less than 2.0 m. Water resources are distributed through the delta wetland network. Haizhu lake and the integrated river-orchard wetlands play a vital role in the regulation water level.

#### □ Ecological services

Maintaining biodiversity: There are 835 vascular plants and 1025 animals, including the IUCN Red listed endangered species. The ongoing wetland restoration is creating suitable habitat for more number of organisms.

Flood control and disaster reduction: Haizhu wetland help in storing rainfall water. It can absorb about 2 million cubic meters of rainwater and regulate the waterlogging of 50 square kilometers in the surrounding urban area.

Carbon sequestration and climate regulation: The average concentration of PM2.5 around the wetland is 25  $\mu\text{g}/\text{m}^3$ , which is about 20% lower than the average level of Guangzhou. The average temperature in the wetland is 0.5-1  $^{\circ}\text{C}$  lower than that in Guangzhou.

Improving water quality: Haizhu wetland helps in regulating the hydrological features of natural tides which improves the water exchange and self-purification capacity of the rivers.

Culture and recreation: Haizhu wetland is the inheritance of the Lingnan folk culture, and is essential for continuing the local wetland culture. In the past three years, 1200 CEPA activities has been carried out, with over 2 million participants. It has received 30 million tourists.

### 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	River Branches	2	132.93	Representative

#### Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type
2: Ponds	Pond	3	69.23
3: Irrigated land	paddy field	0	0.02
4: Seasonally flooded agricultural land	Raised Field Agroforest Wetland	1	384.1
9: Canals and drainage channels or ditches	Ditch	4	10.49

#### Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Cultivated land	0.06
Urban green space	71.57
Construction land	82.95

(ECD) Habitat connectivity

Artificial control

### 4.3 - Biological components



## 4.3.1 - Plant species

## Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Averrhoa carambola</i>	Widespread Species
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Broussonetia papyrifera</i>	Widespread Species
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Clausena lansium</i>	Widespread Species
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Dimocarpus longan</i>	Widespread Species
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Litchi chinensis</i>	Widespread Species
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Melia azedarach</i>	Widespread Species
TRACHEOPHYTALILIOPSIDA	<i>Oryza sativa</i>	Widespread Species
TRACHEOPHYTALILIOPSIDA	<i>Phragmites australis</i>	Widespread Species
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Psidium guajava</i>	Widespread Species
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Trema tomentosa</i>	Widespread Species
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Triadica sebifera</i>	Widespread Species
TRACHEOPHYTALILIOPSIDA	<i>Zizania latifolia</i>	Widespread Species

## Invasive alien plant species

Phylum	Scientific name	Impacts
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Alternanthera philoxeroides</i>	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Bidens alba</i>	Actual (minor impacts)
TRACHEOPHYTALILIOPSIDA	<i>Eichhornia crassipes</i>	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Ipomoea cairica</i>	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Mikania micrantha</i>	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Praxelis clematidea</i>	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Wedelia trilobata</i>	Actual (minor impacts)

## 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>Actitis hypoleucos</i>				Widespread Species
CHORDATA/AVES	<i>Alcedo atthis</i>				Widespread Species
CHORDATA/AVES	<i>Amauornis phoenicurus</i>				Widespread Species
CHORDATA/AVES	<i>Anas poecilorhyncha</i>				Widespread Species
CHORDATA/AVES	<i>Ardea cinerea</i>				Widespread Species
CHORDATA/AVES	<i>Ardea purpurea</i>				Widespread Species
CHORDATA/AVES	<i>Ardeola bacchus</i>				Widespread Species
CHORDATA/AVES	<i>Buteo buteo</i>				Widespread Species
CHORDATA/AVES	<i>Egretta garzetta</i>				Widespread Species
CHORDATA/AVES	<i>Elanus caeruleus</i>				Widespread Species
CHORDATA/AVES	<i>Falco tinnunculus</i>				Widespread Species
CHORDATA/AVES	<i>Gallinula chloropus</i>				Widespread Species
CHORDATA/AVES	<i>Hydrophasianus chirurgus</i>				Widespread Species
CHORDATA/AMPHIBIA	<i>Hyla chinensis</i>				Endemic species
CHORDATA/AVES	<i>Ixobrychus sinensis</i>				Widespread Species
CHORDATA/AVES	<i>Motacilla alba</i>				Widespread Species
CHORDATA/AVES	<i>Motacilla cinerea</i>				Widespread Species
CHORDATA/AVES	<i>Nycticorax nycticorax</i>				Widespread Species
CHORDATA/AMPHIBIA	<i>Rhinella achavali</i>				Widespread Species
CHORDATA/REPTILIA	<i>Scincella modesta</i>				Endemic species
CHORDATA/AVES	<i>Tachybaptus ruficollis</i>				Widespread Species
CHORDATA/AVES	<i>Tringa ochropus</i>				Widespread Species

Invasive alien animal species

Phylum	Scientific name	Impacts
CHORDATA/ACTINOPTERYGII	<i>Clarias gariepinus</i>	Actual (minor impacts)
CHORDATA/ACTINOPTERYGII	<i>Hypostomus plecostomus</i>	Actual (minor impacts)
CHORDATA/ACTINOPTERYGII	<i>Oreochromis niloticus</i>	Actual (minor impacts)

## 4.4 - Physical components

### 4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Cwa: Humid subtropical (Mild with dry winter, hot 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.

Near the estuary in lower reaches of Pearl River System, it is located at mid-northern part of the Pearl River Delta.

#### 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)

According to the soil layer structure characteristics, the soil mass of Haizhu wetland can be categorized into a multi-layer structure. The soil layer is relatively complex, mainly consisting of silt, muddy soil, muddy sand, shells, oyster shells, rotten wood, a small amount of plastic clay soil, and low-density to medium-density sand. The soil is delta sedimentary soil, which belongs to the subclass of moist soil type. The parent material of wet fluvo-aquic soil is fluvial alluvium in the Pearl River Delta. It has the characteristics of a black and oily ploughing layer, strong water storage and retention, long-term fertility, good tillering ability, and coordination of water, fertilizer, and gas; Wet fluvo-aquic soil is a kind of agricultural soil with high maturity for long-term cultivation of vegetables. The distribution of wet fluvo-aquic soil in the Haizhu area covers the whole area of Haizhu wetland and the eastern and southern parts of the Haizhu district.

#### 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?	
Feeds groundwater	No change
To downstream catchment	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 water source of Haizhu wetland is tidal river branches and precipitation. The tides of the river branches are irregular semidiurnal tides, and the annual average tide range is less than 2.0 m. It's a weak tide estuary. The interannual variation of the tidal range is small but relatively large within the year. The water resources in the wetland are further distributed through the delta wetland network of the unique Lingnan water-village culture. Precipitation is also an important water source for the wetland. The annual precipitation is about 1783.8 mm, with less precipitation in winter and spring and more in summer and autumn. The precipitation in the flood season (April to September) accounts for 80.6% of the total annual rainfall, and the precipitation in May and June is the most concentrated. Haizhu lake and the river-orchard wetland complex play a vital role in the regulation of storing rainfalls and floods.

(ECD) Connectivity of surface waters and of groundwater	Connective
(ECD) Stratification and mixing regime	Partially stratified, while mixed at the confluence of rivers and ditches.

#### 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

(ECD) Water turbidity and colour	Dark blue
(ECD) Light - reaching wetland	Reachable

(ECD) Water temperature **High water temperature in summer, up to 31.7°C; low water temperature in winter, average 16.5°C.**

#### 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

#### (ECD) Dissolved gases in water

The dissolved oxygen is 1.77mg/L~6.23mg/L

#### 4.4.8 - Dissolved or suspended nutrients in water

- Eutrophic
- Mesotrophic
- Oligotrophic
- Dystrophic
- Unknown

(ECD) Water conductivity **106.75µs/cm**

#### 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: i) broadly similar  ii) significantly different

- Surrounding area has greater urbanisation or development
- Surrounding area has higher human population density
- Surrounding area has more intensive agricultural use
- Surrounding area has significantly different land cover or habitat types

Please describe other ways in which the surrounding area is different:

Haizhu wetland is in the southeast of Haizhu District, central Guangzhou. Around the wetland are high-tech enterprise centers such as Pazhou Artificial Intelligence and Digital Economy Experimental Zone, Weipitch Center, and TIT Creative Industrial Park. Outside the wetland, there are dense population, dense buildings, developed commerce, convenient transportation, complete living facilities, and a high degree of urbanization, significantly different from the natural environment of Haizhu wetland. The surrounding communities of Haizhu wetland include Xiaozhou Village, Tuhua village, and Longtan Village on Huazhou Street; Luntou village, Beishan village, and Chisha village on Guanzhou Street; Dongfeng Village and Sanjiao village on Nanzhou Street. In total, there are three administrative streets and eight communities.

### 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	Low
Fresh water	Water for irrigated agriculture	High
Genetic materials	Ornamental species (live and dead)	High

##### Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Medium
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)	Low
Hazard reduction	Flood control, flood storage	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	High
Recreation and tourism	Water sports and activities	High
Recreation and tourism	Picnics, outings, touring	High
Spiritual and inspirational	Cultural heritage (historical and archaeological)	High
Spiritual and inspirational	Aesthetic and sense of place values	High
Scientific and educational	Educational activities and opportunities	High
Scientific and educational	Major scientific study site	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Medium
Scientific and educational	Long-term monitoring 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	Accumulation of organic matter	High
Soil formation	Sediment retention	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	High
Nutrient cycling	Carbon storage/sequestration	High
Pollination	Support for pollinators	High

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

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):

[1] Assessment report on ecosystem services of Haizhu wetland Guangzhou pilot project of sustainable urban cooling in China  
 [2] Zhu Weijun, Liu Dongxuan, Huang Yi, Chang Xiangyang, she Nian, Feng BAOYING. Preliminary study on non use value of Guangzhou Haizhu National Wetland Park open area based on conditional value method [J]. Ecological science, 2020,39 (04): 218-225  
 [3] Liu Hongxiao, et al."The effect of urban nature exposure on mental health—a case study of Guangzhou." Journal of Cleaner Production 304. (2021): doi:10.1016/J.JCLEPRO.2021.127100.  
 [4] Liu Dongxuan Evaluation of ecosystem service function value of Guangzhou Haizhu National Wetland Park [D]. Guangzhou University, 2019

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland

Description if applicable

The unique delta complex wetland ecosystem and high-quality environmental resources driven by the tidal hydrology of Haizhu wetland have laid a good foundation for wetland CEPA activities. It is a rare practical CEPA base in a megalopolis in China. Haizhu wetland gives full play to the functions of "urban ecological comprehensive service, CEPA, and cultural heritage," actively explores the "wetland +" mode, broadens the connotation of wetland utilization, and successfully transforms the disadvantages into advantages.

1. Build schools of natural education with high standards

Since the establishment of natural school in 2015, it has established long-term and stable cooperative relations with 125 primary and secondary schools, 20 social institutions, 10 universities, and 5 public welfare organizations. It has developed excellent nature-based courses, which held more than 3000 times, affecting more than 2 million people.

2. Build and improve the system of science popularization and education

To ensure the orderly development of wetland CEPA activities, it has established a full-time CEPA team with solid professionalism. There are more than 50 full-time and part-time CEPA team members, and 133 professional CEPA volunteers have been trained. It has developed over 20 wetland science and education materials, leading the national wetland park CEPA work.

3. Combination of on-site and on-campus ecological education

With the support of Haizhu District Education Bureau, together with nine schools, Guangdong Guangzhou Haizhu National Wetland Park has compiled the curriculum design of natural education, which has been rated as an excellent project by Guangzhou Education Bureau and officially used in 20 primary schools in Haizhu District. More than 3000 primary school students have experienced the exciting and practical wetland-themed curriculum at school; it has opened the journey of seamless connection between natural education and campus primary education and created a national precedent.

4. Build a national wetland education demonstration camp

Teaming up with a few nationally influential national wetland parks, the National Wetland Park Pioneer Alliance was established. Haizhu wetland innovatively proposed the concept of "wetland +," shared its experience, and cooperated with other national wetland parks to carry out wetland research, promote the sharing of wetland park resources, and play an innovative leading role in wetland natural education.

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

Description if applicable

Under the influence of well-developed commodity agriculture, Haizhu traditional agricultural system made full use of the natural conditions of high temperature and rain, its location at the mouth of Peral River and its densely distributed water network, creating a unique agricultural production system in South subtropical region named the "High-Ridge-and-Deep-Ditch Traditional Agricultural System."

1. Rare High-Ridge-and-Deep-Ditch Traditional Agricultural System Around the Globe

It is a relatively stable farmland system created by Haizhu ancestors under the social and economic background of developing dry farming with more people and less land. The high ridge and deep ditch system in Haizhu District began in the Qin and Han Dynasties and had a history of more than 2000 years. Today, it covers more than 800 ha in the heritage site.

2. Splendid and long farming history of river island

Haizhu District, formerly known as "Jiangnan Island" in ancient times, is located in the weak tidal estuary of the Pearl River Delta. Haizhu District is one of the earliest reclamation areas in the Pearl River Delta with the most distinctive culture. As early as 5000 years ago, human beings lived and engaged in farming activities here.

3. Rich biodiversity and diverse traditional agricultural species

Haizhu wetland, the main component of the high-ridge and deep-ditch agricultural cultural heritage, is known as its rich biodiversity and unique ecological functions. The diversity of land use in the high-ridge-and-deep-ditch system makes the heritage site rich in agricultural biodiversity.

4. Rich cultural resources of Pearl River

The unique natural conditions of Lingnan water village determine the way of life, production, thinking, and behavior of the Haizhu people. 'Saltwater Song' has been recorded over 2000 years since the Song Dynasty as a provincial intangible cultural heritage. Some traditional temples are all essential manifestations of Haizhu people's water worshipping.

5. Successful "Pathfinder" of Agricultural Cultural Heritage Protection

Similar to the world's important agricultural and cultural heritage, the traditional vineyard in Xuanhua city, Hebei Province, high-ridge and deep-ditch agricultural system in Haizhu is a rare heritage located in the center of Guangzhou city. With the rapid development of urbanization, Haizhu's high-ridge and deep-ditch system has become a successful "Pathfinder" in protecting agricultural and cultural heritage.

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

#### 4.6 - Ecological processes

(ECD) Animal reproductive productivity	In Haizhu Wetland, there are many breeding birds, including Grey heron, Little egret, Black-crowned night-heron, Common moorhen, White-breasted waterhen, and spot-billed duck, which are thousands of birds every year.
(ECD) Vegetational productivity, pollination, regeneration processes, succession, role of fire, etc.	Haizhu Wetland has a southern subtropical oceanic monsoon climate, with sufficient sunlight and abundant rainfall. There are mostly evergreen plants, with high vegetation productivity, and a rapid succession and regeneration process.
(ECD) Notable species interactions, including grazing, predation, competition, diseases and pathogens	The migratory birds may bring diseases such as avian flu.
(ECD) Notable aspects concerning animal and plant dispersal	There are some alien species in the wetland, which has a certain impact on the spread of native species.
(ECD) Notable aspects concerning migration	Stopover, breeding and wintering ground of migratory birds.
(ECD) Pressures and trends concerning any of the above, and/or concerning ecosystem integrity	Extreme weather events (such as heavy rain and typhoons) have a certain impact on the Haizhu Wetland; this wetland park is located in the prosperous city center of Guangzhou, and the wetland is subject to greater human disturbance.

## 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
Local authority, municipality, (sub)district, etc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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

Haizhu wetland has been completely expropriated as state-owned land by March 2012, with clear ownership and no dispute. Wetland land acquisition is the first case of "land acquisition without transfer" in China. After land acquisition, the nature of land use will not be changed, and all the land will be used for wetland protection and construction. According to the Reply of the Ministry of land and Resources on The Land Acquisition Plan of Guangzhou Ten Thousand Mu Orchard Wetland Reserve (gtzh [2012] No. 199), it is designated as a key state-owned ecological protected area, and all relevant stakeholders have no dispute on the ownership and use of land.

#### 5.1.2 - Management authority

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

Guangzhou Haizhu Wetland Management Office

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

Director CAI Yin

Postal address:

168 Xin Jiao Zhong Road, Haizhu District 510220, Guangzhou, Guangdong, China

E-mail address:

haizhuwetland@163.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
Housing and urban areas	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Commercial and industrial areas	Medium impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Tourism and recreation areas	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Dredging	Medium impact		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water releases	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads	High impact		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Utility and service lines (e.g., pipelines)	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Shipping lanes		Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Hunting and collecting terrestrial animals		Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Gathering terrestrial plants	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fishing and harvesting aquatic resources	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	Medium 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
Dams and water management/use	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Invasive non-native/ alien species	Medium impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Introduced genetic material		Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Household sewage, urban waste water	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Agricultural and forestry effluents		Low impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Garbage and solid waste	Medium impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Air-borne pollutants	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Excess heat, sound, light	High 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
Temperature extremes		Low impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Habitat shifting and alteration	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	Guangdong Guangzhou Haizhu National Wetland Park		partly

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

- Ia 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	Proposed
Improvement of water quality	Partially implemented
Habitat manipulation/enhancement	Partially implemented
Hydrology management/restoration	Partially implemented
Re-vegetation	Partially implemented
Soil management	Proposed
Land conversion controls	Partially implemented
Faunal corridors/passage	Proposed



Species

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

Other:

The wetland park was established in 2012.

1. Establish an efficient coordination mechanism  
From the strategic height of the "ecological zone", the government of Haizhu District supported Haizhu Wetland from various aspects such as system construction, policy, and finance. With Haizhu Wetland, Haizhu District built a central ecological zone with diverse forms and complex functions.
2. Improve the management with system construction as the starting point  
To meet the needs of biodiversity conservation and management, relevant management systems have been formulated and promulgated so that the conservation and restoration of Haizhu Wetland can be governed on legal bases.
3. Science and technology empowerment, with efficient management  
With the help of a "5G display screen", "5G + Drone", "5G + Sensor," and other high-tech means, the construction mode of "1+5" is constructed, that is, one ecological data center and five visualization application topics: biology, water quality, soil, air, and human flow. It provides data support and guidance decision-making tools for real-time monitoring, and providing data reference for scientific research and analysis.
4. Strengthen management and patrol to ensure the safety within the wetland
  - Reasonable setting of boundaries and posts  
To meet the needs of habitat protection and biodiversity protection in Guangzhou Haizhu National Wetland Park, Guangdong Province, the boundary posts of the wetland were set to the notion of the boundary. In the meantime, ecological isolation zone and barriers were constructed to minimize human disturbance.
  - Strengthen routine inspection, management, and protection  
First, an inspection and law enforcement team was established. Second, the routine inspection system for the management was formulated to realize the institutionalization of management. Thirdly, monitor cameras were installed at the critical management nodes and intersections.
  - Ecological restoration, management, and maintenance in place  
215 full-time agricultural technicians were employed to regularly carry out the prevention and control of alien species, weed removal, water facilitation maintenance, river channel clearing and dredging, and Dengue fever prevention and control.
  - Protection priority and reasonable zoning  
To meet the needs of recreation and leisure, wildlife habitat conservation and restoration, correctly handle the relationship between wetland protection and rational utilization, Haizhu wetland is divided into three zones, and each zone was managed as different use.

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

**1. Establish a scientific monitoring system**

Haizhu wetland has gradually become Guangzhou's key area of urban ecological construction. The tracking and monitoring of eco-environmental factors such as water quality, hydrology, atmosphere, and biodiversity have become a necessary part of environmental monitoring in Guangzhou. Based on the construction of the platform, Haizhu Wetland supported many different research projects, information sharing, CEPA activities, and so on.

**2. Joint professional research institutions to promote research**

(1) On October 9, 2021, Haizhu Wetland was included in the third batch of national forestry and grassland long-term scientific research bases. Currently, the critical task of planning and building the national long-term scientific research base of Haizhu wetland is wetland conservation and restoration.

(2) With the Institute of geography, Guangdong Academy of Sciences, we built the observation and research station of urban agglomerations in Guangdong, Hong Kong, and Macao to carry out long-term observation and research on the ecological environment.

(3) The "wetland water environment and water ecology research laboratory" was jointly built with academician Yang Zhifeng of Guangdong University of technology. We fully cooperate in scientific research monitoring, academic exchanges, and science education.

**3. Relying on social forces to carry out surveys**

Through organizing bird-watching competitions or professional practices with Guangzhou Natural Observation Association, Guangdong Environmental Education Promotion Association, and other institutions, bird and plant surveys were completed.

**4. Monitoring to guide wetland protection**

The primary status and patterns of various environmental factors are systematically mastered through the comprehensive tracking and monitoring of biological and abiotic environmental factors, such as water quality, hydrology, atmosphere, soil, and biodiversity. Then, the protection work is planned according to the learned facts. Those are: (1) The investigation of terrestrial animal and plant resources laid the foundation for bird introduction and ecological restoration projects; (2) The surveys of aquatic organisms point fish species protection in the right direction; (3) The soil pollution investigation provides a scientific basis for reconstructing the defective forests; (4) Water quality and air quality monitoring guide law enforcement of pollution source control.

## 6 - Additional material

### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Master plan for wetland restoration of Haizhu National Wetland Park, Guangzhou, Guangdong Province. January 2019  
 Master plan of Guangdong Haizhu National Wetland Park (2013-2022) July 2012  
 Environmental education planning of Haizhu National Wetland Park, Guangzhou, Guangdong Province. September 2017  
 Ecological monitoring planning of Haizhu National Wetland Park, Guangzhou, Guangdong (2018-2027)  
 A survey of insect species in Haizhu wetland, Guangzhou September 2018  
 Cheng Xiaohui, Ou Jiabin, Liu yeguang. Pilot study on unified registration of Guangdong Haizhu National Wetland Park [J]Surveying and mapping bulletin, 2019 (S2): 271-274  
 Li Songtao Performance test and method research on analytical instrument of Haizhu wetland phase II automatic water quality monitoring system [J]Guangzhou Environmental Science, 2017, 32 (1): 30-32  
 Liu JinFang Study on water and soil quality and wetland plant landscape of Haizhu wetland phase I [D]Zhongkai College of agricultural engineering, 2018  
 Tang Hong, Feng Yongjun, Liu Jincheng, et al Bird diversity in the process of ecological restoration of Haizhu wetland in Guangzhou [J]Journal of wildlife, 2018, 39 (1): 86-91  
 Xiao Rongchen, Xie Rongchen Spatiotemporal variation characteristics of water quality and protection strategies of Haizhu wetland in Guangzhou from 2015 to 2016 [J]Guangdong chemical industry, 2018,45 (377): 176-178  
 Pan runjiao Eutrophication assessment and control measures of Haizhu wetland in northern part of Guangzhou City [J]Guangdong chemical industry, 2015, 42 (301): 143

#### 6.1.2 - Additional reports and documents

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

<2 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:



Little egrets ( XIE Huiqiang, 31-03-2016 )



Spot-billed Ducks ( XIE Huiqiang, 13-04-2016 )



Black-Winged Stilt ( XIE Huiqiang, 08-09-2017 )



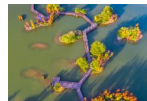
Great Cormorant ( XIE Huiqiang, 01-11-2017 )



Yellow-breasted Bunting ( ZHAO Guangsheng, 17-10-2018 )



Restored island of birds ( XIE Huiqiang, 20-03-2018 )



Viewing gallery in Haizhu Lake ( XIE Huiqiang, 11-01-2018 )



Grey Herons ( XIE Huiqiang, 26-04-2019 )



Waterbirds nested in Haizhu Wetlands ( XIE Huiqiang, 17-10-2019 )



Restored agroforest wetland for waterbirds ( XIE Huiqiang, 28-07-2020 )



Haizhu Wetlands & City ( XIE Huiqiang, 07-08-2020 )



Nature Classroom in Haizhu Wetlands ( XIE Huiqiang, 11-08-2020 )



Scientific competition on ecological restoration of Haizhu wetland in Guangdong, Hong Kong and Macao ( XIE Huiqiang, 26-10-2020 )



One new species Sphenoraia haizhuensis found in Haizhu Wetlands ( YU Yali, 29-06-2021 )



Mudflats emerged with the tidal action of Pearl River Estuary ( XIE Huiqiang, 06-07-2021 )

#### 6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation