

Information Sheet on Ramsar Wetlands

(RIS) -2006-2008 version

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

Notes for compilers:

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

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

October 10, 2007

3. Country:

The People's Republic of China

4. Name of the Ramsar site:

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

Guangdong Haifeng Wetlands

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

This RIS is for (tick one box only):

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

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

a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

If the site boundary has changed:

- i) the boundary has been delineated more accurately; or
- ii) the boundary has been extended; or
- iii) the boundary has been restricted**

and/or

If the site area has changed:

- i) the area has been measured more accurately; or
- ii) the area has been extended; or
- iii) the area has been reduced**

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

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

7. Map of site:

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

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

- i) a **hard copy** (required for inclusion of site in the Ramsar List);
- ii) an **electronic format** (e.g. a JPEG or ArcView image);
- √ iii) a **GIS file providing geo-referenced site boundary vectors and attribute tables.**

b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The boundary is the same as that of the existing Guangdong Haifeng Gongping and Daihu Nature Reserve.

Dongguan Lian'anwei District: The boundary of the district is Chang Sha Wan beaches and some marine areas in the south, Xizha Station in the north, the Haifeng county boundaries in the east, Dongao and Dongjiaya village of Meilong Town in the west. It includes Yuanshan village of Fucheng Town, Tangtou village of Lianan Town, Xiapu village, Youchong village and Meilong farm.

Gongping district: The boundary line is the dike in the south, Haifeng-Zijin highway in the west, the distribution of villages in the east and north, according to artificial division.

Great lake district: It lies Shuizha and Luohe of Haifeng county boundary in the north, Maozhouliao of Chikeng Town in the west, according to roads, rivers, drain lines, the highway by the foot of the northern Donghaiwan mountain, Luodi mountain, Heng mountain and Magong mountain, and Jieshiwan outside the boundary line from the beach area 300 m in the south.

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

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

Gongping District: 23°2'-23°7'N, 115°22'-115°28'E

Dahu District: 22°50'-22°52'N, 115°30'-115°37'E

Dongguan Liananwei District: 22°50'-22°53'N, 115°11'-115°19'E

9. General location:

Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town.

The site is located along the coast of the South China Seas within Haifeng County, Shanwei, Guangdong Province. It is 290 km east of Guangzhou, 197 km away from Shenzhen, 180km west of Shantou, 81 nautical miles away from Hong Kong.

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

Gongping District: 50-300m, 100m in average

Daihu District: 0-50m, 10m in average

Dongkuan Lian'anwei District: 0-30m, 8m in average

11. Area: (in hectares)

11,590.5 ha in total:

Gongping District: 4,703 ha

Dahu District: 2,385 ha

Dongguan Liananwei District: 4,501 ha

12. General overview of the site:

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

Haifeng wetland is located in Haifeng County, Shanwei City, Guangdong Province, southern coastal China. Influenced by the previous crustal movements, the geomorphology exhibits a saddle-shaped configuration from northwest to southeast. It is typical among the south subtropical coastal/marine wetlands and reservoir wetlands in China.

Haifeng wetland consists of Gongping District, Dahu District and Dongguan Lian'anwei District. These three parts are linked by the water system of Huangjiang River. The biodiversity is rich in the site. Numerous rare bird species such as *Platalea minor* inhabit here, forming a spectacular scene. It is an important habitat for waterfowls in south China and thus is appraised as "hometown of Chinese waterfowls".

Except for flood moderating and lessening flood disasters, the wetlands could also play important roles in maintaining high water quality, regulating and stabilizing regional climate. They are essential guarantees for local economy's sustainable development.

Gongping reservoir supplies water resource for industry, agriculture and drinking, also for generating electricity and aquiculture. The estuaries, bays and shallow sea area in Dahu and Dongguan Lian'anwei District can provide bases for aquiculture. Aquiculture products with high economic value, such as fish, shrimps, crabs, shellfish and abalones, are the main economic sources of local residents.

13. Ramsar Criteria:

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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14. Justification for the application of each Criterion listed in 13 above:

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

Criterion 1:

Haifeng wetland has diverse wetland types, and mainly consists of tidal flats, reservoirs, ponds, estuarine waters, estuarine delta waters, aquicultural ponds, intertidal mangrove wetlands, shallow sea waters, sand beaches, gravel/scree beaches, permanent river ponds, etc. The area of wetlands covers 68.34% of the total reserve. Different types of wetlands together constitute the complex compound wetland ecosystem, which is a typical representative of south China's subtropical offshore and coastal wetlands and an important part of South China Sea ecosystems. Wetlands here have multiple functions including flood regulation, aquaculture, water supply, climate regulation, water quality purifying, tourism promotion, scientific research and education. The site is not only an important breeding habitat for winter and summer migratory birds, but also of great importance in regulating regional climate, declining regional flood harm and conserving regional ecological security. It is an important guarantee to local economy's sustainable development.

Criterion 2:

Among 163 species of birds recorded at this site, 1 species is under national first class key protection, 24 species are under national second class protection, 6 species are included in IUCN's Red List, 71 species are listed in the Agreement between the Government of P.R. China and Japan for the Protection of Migratory Birds and Their Environment, 28 species are listed in the Agreement between the Government of P.R. China and Australia for the Protection of Migratory Birds and Their Environment.

Two endangered species and 4 vulnerable species recorded in IUCN's Red List are listed below:

Species Latin name	Chinese name	Category in the IUCN Red List	CITES Appendix	CMS Appendix	Class of national protected animal
<i>Platalea minor</i>	Heilianpilu	EN		I	II
<i>Tringa guttifer</i>	Xiaoqingjiaoyu	EN	I	I	II
<i>Pelecanus crispus</i>	Juanyutihu	VU	I	I/II	II
<i>Aquila clanga</i>	Wudiao	VU		I/II	II
<i>Larus saundersi</i>	Heizuiou	VU		I	
<i>Anas formosa</i>	Hualianya	VU	II	I	

Criterion 4:

The site is located at the global migratory birds' important migrating route in East Asia, and is an important part of the natural reserve network of birds and wetland typology of South China Sea in the Asia-Pacific region. Also, it is one of a few nature reserves for birds along the southeast coast of China. Each year, at least 40,000 individuals of migratory birds live here though the winter, including many rare species such as *Platalea minor*. The wetlands provide critical refuge and inhabiting place for global endangered waterfowls.

Criterion 5:

There are 163 species of birds in Haifeng Wetland, most of which are waterfowls. Nearly 80 waterfowl species perch in the site during migration, with an average individuals of 40 000 each year. According to 2006's investigation, there are 7 000 *Phalacrocorax carbo* individuals, 6 000 *Anas acuta Linnaeus* individuals, 5 000 *Sturnus sericeus* individuals, 4 000 *Larus ridibundus* individuals, 4 000 *Calidris alpine* individuals, 1 000 *Chlidonias hybridus* individuals, 1 000 *Chlidonias leucoptera* individuals and 1 400 other waterfowls living in this area, with a total number of about 42 000.

Criterion 6:

According to the monitoring records in the winters during 2005-2007, there are 4 species of waterfowl reached the 1% criterion:

Scientific name	Chinese name	Individuals	Subspecies & population	1% criterion
<i>Platalea minor</i>	Heilianpilu	72 (2007 winter)	<i>minor</i>	15
<i>Pelecanus crispus</i>	Juanyutihu	22 (2005 winter)	E Asia	1
<i>Anas falcate</i>	Luowenya	358 (2005 winter)	C & E Asia	350
<i>Podiceps cristatus</i>	Fengtoupiti	393 (2006 winter)	<i>cristatus</i> , E Asia	375

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

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

a) biogeographic region:

Central China region, Sino-India sub-division, Oriental realm

b) biogeographic regionalisation scheme (include reference citation):

Zoogeography of China (Zhang Rongzu, 1999)

16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Geology and geomorphology:

The geomorphology shows a declining pattern from northwest to southeast, which was formed by the organic movement during Yanshanian orogeny of the Jurassic Period. The Lianhua Mountain range stretches in the northwest, the Huangjiang River Plain lies at the central and eastern part and, the southern part consists of coastal hills and terrace. The Lianhua Mountains continues from northeast to southwest for several hundreds of kilometers, entering the sea in Houmen, Haifeng. The mountain range even reaches to Lantau Island of Hong Kong. The Lianhua Mountains is the origin of a couple of drainage systems, with diverse geographical and geomorphologic features.

Origin:

Dahu District and Donganlianguanwei District are natural coastal wetlands while Gongping Reservoir is an artificial wetland.

The wetlands in Dahu and Dongguan Lian'anwei District originate from natural coastal wetlands, while Gongping Reservoir is a man-made wetland.

Hydrology and water quality:

Located in a low-latitude region, the coastal Guangdong areas experience strong solar radiation, long coastline and numerous estuaries and bays. The mean water surface temperature ranges from 21 °C to 27 °C with seasonal variations. The maximal water temperature is 34-35.6 °C, while the minimal water temperature is 6-10 °C. The variation of the sea water's salinity was mainly influenced by the tidal current. The mean annual surface salinity is 27.83‰ while the mean annual near-bottom salinity is 30.23‰. The sea water is less saline in summer than in winter. The 67 km Huangjiang River is the major river in this area, passing through 16 villages and towns in Haifeng before entering Changsha Bay. Six large and medium sized reservoirs were built with a total catchment area of 501 km², representing 36.9% of the total drainage area. Three large bays, namely, Changsha Bay, Gaoluo Bay and Jiulong Bay are found in middle and lower Huangjiang River.

Soil:

Over 10 types of soil can be found, including lateritic red soil, paddy soil, coastal solonchak, coastal aeolian soil, bog soil, and Litho soil, etc. The topsoil is thick, composed of a relatively thick humus layer, a medium amount of organic matters with a good soil structure.

Dahu District is composed of an estuary and shallow ponds, mudflats, sand beaches and paddy fields. The parent material of the soil is mainly marine sediment. The soil type is marsh soil and saline paddy soil which is thick and fertile.

Dongguanlianwei District is mainly a kind of reclaimed wetland in the coastal delta region. The parent material of soil is marine deposit which produced mainly marsh soil here marked with thick layer and fertility.

Dongping District consists of Gongping Reservoir and its surrounding terraces. The parent materials of soil within this district are mainly granite and sandstone.

Tidal variations:

Tides of Guangdong sea area are originated from the Pacific Ocean tide after its flowing into South China Sea through Bashi Strait and Balin Strait. Tides coming from Taiwan Strait have effects on east Guangdong areas. Influenced by geographical features, tides along Haifeng coasts are of irregular semidiurnal type.

Climate:

Haifeng is located at the southern rim of the Tropic of Cancer and has a typically south subtropical maritime climate with distinct seasonal variations, abundant rainfall and long hours of sunshine. The mean annual temperature is 22 °C, with a 360 days' frost-free period. The mean annual rainfall is 2382 mm. Spring and summer are dominated by southwesterly wind while summer and autumn are affected by typhoons (tropical cyclones).

17. Physical features of the catchment area:

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

Haifeng County lies between mountains and sea areas. Primary rivers all evolve from northwestern mountains. These rivers have only one flowing direction to the southeast till into the ocean. Huangjiang River and Chishi River are the two river systems with major rivers of Huangjiang River, Chishi River, Daye River and Longjin River. There are 32 rivers in the county each of which has a catchment area more than 20 km². The total length of these 32 rivers is 5242 km. Among these rivers, there are 17 rivers whose catchment area is more than 40 km² each. The total length is 408 km.

The mean annual average runoff is 28.468×10⁸m³. It reaches 43.841×10⁸m³ in high flow years and 15.088×10⁸m³ in low flow years. Huangjiang River has its origin in Zhutai Mountain of Lianhua Cordillera. It flows pass 16 towns and villages of Haifeng with a total flowing area of 1379 km² and a total length of 67 km. The annual runoff of Huangjiang River is 19.37×10⁸m³. It finally runs into Red Sea Strait at Maguanyuan Island.

In northwest catchment there lay mountains, while in middle east and south catchment there lay plains, coastal hills and offshore plain mesas respectively. More than 10 types of soil could be found here including latosolic red soil, paddy soil, vegetable garden soil, tide and sand soil, offshore salty soil, seashore sand soil, lithosol and so on. The upper layer consists of thick soils. The humus layer is thick and organic materials are moderate. It has great aggregate structure.

The reserve has a characteristic of easily distinguished seasons, warm climate, heavy rainfall and plentiful sunlight in the reserve, the climate type of which belongs to south subtropical maritime climate. The annual average temperature is 22℃, and the annual average frost-free period consists of 360 days. It has an average annual precipitation of 2382mm. The Southwest wind dominates here in spring and summer. It is easily influenced by typhoon in summer and autumn.

18. Hydrological values:

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

The Gongping reservoir is located in lowland plains east to Lianhua Mountain, with a large catchment area, and is one of the largest reservoirs in Guangdong province. It guarantees local agricultural and industrial water demands as well as drinking water demands. Wetlands here are suitable habitats for migratory birds to live through winters. Gongping reservoir has valuable functions including storing floodwater, fighting against drought, regulating streamflow, replenishing groundwater, preventing and reducing disaster, purifying water, etc.

Dahu district and dongguanlianwei district locate at the mouth of Huangjiang River. Huangjiang River has a total length of 67 km. It include the following three bays: Changsha Bay, Gaolu Bay and Jiulong Bai, and runs into Red Sea Bay at Magongyan Island. 6 large or mid-size reservoirs have been built on Huangjiang River with a total catchment area of 501 km², which covers 36.9% of the total drainage area. The project of "combining three river channels into one" has been performed at the lower reach of this drainage area. The anti-tide sluice has been built there which has functions of large-area irrigation and flood control. Thus, it provides ecological guarantee for local flood control and fishery industry.

19. Wetland Types

a) presence:

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

Marine/coastal:

<u>A</u>	B	C	D	<u>E</u>	<u>F</u>	<u>G</u>	H	<u>I</u>	J	K	Zk(a)
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Inland:

L	<u>M</u>	N	O	P	Q	R	Sp	Ss	Tp	Ts	U	Va	Vt	W	Xf	Xp	Y	Zg	Zk(b)
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Human-made:

<u>1</u>	<u>2</u>	3	4	5	<u>6</u>	7	8	9	Zk(c)
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b) dominance:

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

G: Intertidal mud, sand or salt flats: 2781.7 ha, 24% of the reserve.

6: **Water storage areas formed by** reservoirs, barrages or dams (generally more than 8 ha), 2,549.9 ha, 22% of the reserve.

F: **Estuarine water, including river mouth and estuarine delta water areas**, 1,738.6 ha, about 15% of the reserve.

A: **Permanent shallow marine waters, mostly having a depth less than 6 meters at low tides, including bays and straits**, 1,275 ha, 11% of the reserve.

E: **Sand beaches, shingle and pebble shores** including sand bars, spits and sandy islets, dunes and marshes among dunes, 1159.1 ha, about 10% of the reserve.

M: **Permanent rivers, including their branching streams, creeks and waterfalls**, 927.2 ha, 8% of the reserve.

1: **Aquaculture** (e.g., fish/shrimp) **ponds**, 811.3 ha, about 7% of the reserve.

I: **Intertidal forest wetlands**, including mangrove marshes and coastal freshwater marsh forests, 231.8 ha, 2% of the reserve.

2: **Ponds**, including farm ponds, stock ponds (generally less than 8 ha), 115.9 ha, about 1% of the reserve.

20. General ecological features:

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

Dahu district and Donganlianguanwei district both locate at the mouth of rivers into the sea, with large areas of coastal beaches, intertidal belts, shallow water areas, a few mangrove forests and artificial ponds, which provide suitable habitats for wildlife to live and search for food. Mangrove forests and surrounding frosts provide necessary habitats for waterfowl species including Anseres, Charadriiformes, Lariformes, Herons, ect.

Gongping reservoir mainly consists of wildlife habitats such as freshwater areas, small islands and surrounding unlands. Plant species in the surroundings mainly include *Dicranopteris pedata*, *Melasoma candidum*, *Glochidion puberum*, *Erigeron acer*, ect. This reservoir provides important habitats for waterfowls including *Podiceps cristatus*, *Milvus korschun*, *Phalacrocorax carbo*, Ardeidae, Anseries, ect.

The abundant water and aquaculture resources within the reserve serve as major economic supports of local community and the reserve itself. Besides, the beautiful landscapes and unique wildlife resources provide advantages for the eco-tourism promotion and the reserve's development.

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. ***Do not include here taxonomic lists of species present - these may be supplied as supplementary information to the RIS.***

Dominate herbaceous plant species here mainly include *Fimbristylis miliacea* (referred as Rizhaopiaofucao in Chinese), *Setaria geniculata* (referred as Xiugouweicao in Chinese), *Phragmites communis* (referred as Luwei in Chinese), *Schoenoplectus trigueter* (referred as Xianshuicao in Chinese), *Cyperus malaccensis* (referred as Jiangdu in Chinese), *Paspalum scrobiculatum* (referred as Quebai in Chinese), ect. Natural plant species include mangrove and bulrush. However, after years' land reclamation, these natural plants exist only in a few places. Mangrove plant species mainly include *Kandelia candel* (referred as Qiuqie in Chinese), *Aegiceras corniculatum* (referred as Tonghua in Chinese), *Acrostichum aureum* (referred as Lujue in Chinese), *Acanthus ilicifolius* (referred as Laoshule in Chinese), *Bruguiera cylindrica* (referred as Mulan in Chinese), *Rhizophora stylosa* (referred as Honghailan in Chinese), *Aricennia marina* (referred as Baigurang in Chinese), *Excoecaria agallocha* (referred as Haiqi in Chinese), *Derris triloliata* (referred as Yuteng in Chinese), *Hibiscus tiliaceus* (referred as Huangjin in Chinese), *Pongamia pinnata* (referred as Shuihuangpi in Chinese), ect. Mangrove associate species include *Pluchea indica* (referred as Kuobaoju in Chinese), *Clerodendrum inerme* (referred as Jiamoli in Chinese), ect. Native vegetation communities surrounding the wetland belong to types of

subtropical evergreen broad-leaved forest and subtropical deciduous monsoon forest.

22. Noteworthy fauna:

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

The fauna belongs to Fujian-Guangzhou coastal sub-region, south China region, Oriental realm. There are 163 bird species (under 43 families of 16 orders) on record in the reserve. There are 22 bird species under second class national protection, such as *Platalea minor* (referred as Heilianpilu in Chinese), *Phalacrocorax Pelagicus* (referred as Hailuci in Chinese), *Pelecanus onocrotalus* (referred as Baitihu in Chinese), *Tringa guttifer* (referred as Xiaoqingjiaoyu in Chinese), *Milvus lineatus* (referred as Heieryuan in Chinese), *Pandion haliaetus* (referred as Eh in Chinese), *Circus melanoleucos* (referred as Queyao in Chinese), *Falco columbarius* (referred as Huibeisun in Chinese), *Centropus sinensis* (referred as Hechiyajuan in Chinese), etc. There are more than 300 *Podiceps cristatus* individuals of global importance, 26 species of birds listed in the Sino-Japan Migratory Birds Protection Agreement, 15 species of birds listed in the Sino-Australian Migratory Birds Protection Agreement.

There are 51 species of amphibians and reptiles in the reserve, belonging to 7 orders' 18 families. Rare animal species include *Sacalia bealei* (referred as Yanbanshuigui in Chinese), *Sacalia quadriocellata nsculpta* (referred as Siyanshuigui in Chinese), *Trionyx sinensis* (referred as Yuan in Chinese), *Takydromus sexlineatus* (referred as Nancaoxi in Chinese), etc.

Fishes inhabiting in the embouchure are mainly freshwater or saltwater species. The dominant fish species include *Clupanodom punctatus* (referred as Banji in Chinese), *Mugil cephalus* (referred as Zi in Chinese), *Mugil soiuy* (referred as Suozi in Chinese), *Sparus latus* (referred as Huangqidiao in Chinese), *Rhabdosargus sarba* (referred as Pingdiao in Chinese), *Acanthopagrus berda* (referred as Huiqidiao in Chinese), *Arius sinensis* (referred as Zhonghuahainian in Chinese), *collichthys lucidus* (referred as Jitoumeitongyu in Chinese), *Otolithes argenteus* (referred as Yinyayu in Chinese), *Muraenesox cinereus* (referred as Haiman in Chinese), *Parargyrops edita* (referred as Erchangjidiao in Chinese), *Saurida sp.* (referred as Shezi in Chinese), *Pseudorhombus oligodon* (referred as Shaoyabanping in Chinese), etc. Fish species that are common in tidal flats include Periophthalmidae, *Bostrichthys sinensis* (referred as Zhonghuawutangli in Chinese), etc. There are 41 fish species, belonging to 23 families of 7 orders in Gongping reservoir. The chief economic fish species include *Hypophthalmichthys molitrix* (referred as Lianyu in Chinese), *Aristichthys mobilis* (referred as Yongyu in Chinese), *Ctenopharyngodon idellus* (referred as Caoyu in Chinese), *Cyprinus carpio* (referred as Liyu in Chinese), *Carassius auratus* (referred as Jiyu in Chinese), *Cirrhinus molitorella* (referred as Lingyu in Chinese), *Xenocypris davidi* (referred as Huangweimidiao in Chinese), *Silurus sp.* (referred as Nian in Chinese), *Channa argus* (referred as Wuli in Chinese), *Squaliobarbus curriculus* (referred as Chiyanzun in Chinese), *Clarias fuscus* (referred as Huzinian in Chinese), *Erythroculter sp* (referred as Hongbo in Chinese), *Parabramis pekinensis* (referred as Bian in Chinese) etc. there are other mini fish species in Gongping reservoir, such as *Ctenogobius giurinus* (referred as Zhixiahuyu in Chinese),

Gambusia affinis (referred as Shiwenyu in Chinese), *Misgurnus anguillicaudatus* (referred as Niqu in Chinese), *Hemiculter leucisculus* (referred as Cantiao in Chinese), etc.

23. Social and cultural values:

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

Haifeng wetland has 3,340 ha of coastal tidelands and 6,660 ha of fish reservoirs and is an important local aquatic breeding farm. Haifeng wetland provides local residents material source and economy source their livings base on. Gongping reservoir serves as water source for Industry, Agriculture and people's drinking, as well as for electricity generation and aquaculture. Estuaries, gulfs and shallow water areas in Dahu and Dongguanlian'anwei serves as aquaculture production bases for local residents, where they cultivate high economic valued aquatic products such as fish, shrimp, crab, shellfish and abalone to earn high income. The local fishing industry accounts for more than 50% of the total agricultural output.

Haifeng wetland is a habitat for global migratory birds to live through the winter. Every year tens of thousands of birds are attracted to inhabit here in winter including many endangered species. Haifeng wetland is an ideal classroom for biology and ecology education for its abundant wildlife resources, and because of which, it becomes an integrative base for scientific research and culture education.

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

Yes

If Yes, tick the box and describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:

Each year, dragon boat races are hold in Duanwu Festival in local rivers, in memory of an ancient Chinese poet. People gradually developed religion belief and activities, for example, to build Mazu Temples to bless for safety and happiness.

- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:**a) within the Ramsar site:**

State ownership. The Nature Reserve has the right to manage while the local communities have the right to use the land.

b) in the surrounding area:

The land ownership and the utilization right belongs to local residents (collectivity, individual).

25. Current land (including water) use:**a) within the Ramsar site:**

The total area of the reserve is 11,590.5 ha, of which Gongping district is 4,703.1 ha; Dahu district is 2,385.5 ha and Dongguanlianwei district is 4,501.9 ha.

Core region: 3,929.8 ha, about 34% of the reserve. It conserves relatively intact natural wetland ecosystem and biodiversity. It is a concentrated distribution area of major protected birds and is also an important breeding and feeding habitat. Human activities here are restricted.

Buffer region: 1,205.67 ha, about 10% of the reserve. It is used for the cultivation of aquatic products, and is also the main place for scientific monitoring activities..

Experiment region: 6,455.03 ha, about 56% of the reserve. It mainly consists of farmlands owned by local farmers.

b) in the surroundings/catchment:

Land in the surroundings are used by local residents for cultivating crops, fruits and vegetations; The coastal shallow area is common land of local residents for fishing and shipping.

The land use type here is mostly farmland on which rice is mainly cultivated and covers more than 70% of the total.

26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:**a) within the Ramsar site:**

The biggest threat is, due to the reclamation of coastal wetlands into farmlands and fishery production in history, natural wetland resources had been destroyed and the size of mangrove coverage had been reduced. Up till now, there only exist 15 hm² of mangrove wetlands. Except in Gongping district, there are relatively many mangrove species in Dongguanlianwei and Dahu districts including *Acrostichum aureum*, *Acanthus ilicifolius*, *Aegiceras corniculatum*, *Excoecaria agallocha*, *Aricennia marina* formation, and so on. After the nature reserve established, the situation is going forwards to restoration.

b) in the surrounding area:

Due to the discharge of domestic water by surrounding residents and agricultural chemicals residues, a small part of rivers has been eutrophicated.

27. Conservation measures taken:

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

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

In 1998, Haifeng Gongping-Dahu Provincial Nature Reserve was established. In 2007, the previous provincial reserve was upgraded to be national reserve and successfully passed the assessment of State Forestry Administration (SFA). The boundary of this Ramsar site is the same as that of the reserve.

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

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

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

The Management plan is under development.

d) Describe any other current management practices:

a: The reserve management administration has signed a forest and bird protection covenant with local communities, and has reached a condominium agreement with surrounding village committees. What's more, a forest and bird protecting force has been set up.

b: Promote international cooperation and communications, cooperate with Hong Kong Branch of World Wildlife Foundation, enhance collaborations with other reserves locating at birds' migratory way in northeast Asia, study a sustainable way to protect and utilize.

c: plan to plant mangrove communities along the edge of the core region to restore local vegetation.

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

The Comprehensive Plan of Haifeng Gongping-Dahu Provincial Nature Reserve has been compiled. Now we are preparing for the promotion to national wetland nature reserve.

29. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Experts from South China Institute of Endangered Animals, World Wildlife Foundation (Hong Kong), Sun Yat-Sen University, etc have come to this reserve many times for scientific research and investigation, and have gained rich fruits. In 2005, cooperating with South China Institute of Endangered Animals, the reserve constructed a field station for long-term monitoring. In 2007 it was promoted national bird monitoring site. Now the reserve is striving for more scientific programs that could be performed within the reserve. Content of these programs include protection and monitoring of rare species, protection and monitoring of migratory birds, investigation and monitoring of bird avian influenza, restoration of the wetland and its biological resource, constructural characteristic of local biodiversity, etc. In 2006, by cooperating with World

Wildlife Foundation (HongKong), constructions of the protection management project, scientific popularization project and education center were promoted, and related scientific facilities were bought. Currently, equipments or facilities of protection are somehow enough while of other aspects need to be renewed.

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

Since 1998, patrol stations and protecting boards have been built in Gongping and Dahu district in order. Such protecting boards were built in Dongguanlianwei after its join into the reserve in 2004. Since 2002, the reserve has been promoting bird monitoring and protecting work and meanwhile producing DV advertising films. In 2005, the publicizing DV film was made. Till now, the reserve has been reported on Guangdong Television, Guangzhou Daily, Nanfang City Daily and Shanwei Daily, etc.

31. Current recreation and tourism:

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

The reserve was known since 2004. Annually around 10,000 tourists come to the reserve, most of which come in winter (since September to next April) for winter migratory bird watching. However, since the reserve construction has not finished yet, the ecological tourism has not been formally promoted. But tourism related work have be included in local governments' long-term planning.

32. Jurisdiction:

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

The territorial jurisdiction belongs to the Forestry Bureau of Guangdong Province

The functional Jurisdiction belongs to Shanwei city government of Guangdong Province.

33. Management authority:

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

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Principal: Mr. Xie Rongru

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34. Bibliographical references:

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

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