

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.

1. Date this sheet was completed/updated:

05/23/ 2001

FOR OFFICE USE ONLY.

DD MM YY

--	--	--

Designation date

--	--	--	--	--	--

Site Reference Number

2. Country:

The People's Republic of China

3. Name of wetland:

Huidong Harbor Sea Turtle National Nature Reserve (Sea Turtle Bay)

4. Geographical coordinates: 22°33'N, 114° 54'E

5. Elevation: average is around 15 m (range from -10 to 25 meter) **6. Area:** 400 ha

7. Overview: (general summary, in two or three sentences, of the wetland's principal characteristics)

This site is in the juncture of Daya Bay and Honghai Bay in South China Sea. Its seawater and sand beach maintain a good environmental quality and have provided habitats for juvenile and female turtles all long. It is also the only nesting area for migratory *Chelonia mydas* in China. The site is the only sea turtle protected area in China at present.

8. Wetland Type (please circle the applicable codes for wetland types; in the present document, the "Ramsar Classification System for Wetland Type" is found on page 9)

marine-coastal: A • B • C • D • E • F • G • H • I • J • K •
Zk(a)

inland: L • M • N • O • P • Q • R • Sp • Ss • Tp
Ts • U • Va • Vt • W • Xf • Xp • Y • Zg • Zk(b)

human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

Please now rank these wetland types by listing them from the most to the least dominant:

E. G. A

9. Ramsar Criteria: (please circle the applicable Criteria; the *Criteria for Identifying Wetlands of International Importance* are reprinted beginning on page 11 of this document.)

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8

Please specify the most significant criterion applicable to the site: 2

10. Map of site included? Please tick yes

(Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map traits).

11. Name and address of the compiler of this form:

Compiler: Zhao Minghui,

Organization: Division of Resources and Environment, Marine and Fishery Bureau of Guangdong Province
Address: No 10 Tong Fu Dong Nancunlu, Zhuhai District, Guangzhou, 510222
Tel: + 86 20 84415819
Fax: +86 20 84230056
E-mail: mhz_email@21cn.com

Please provide additional information on each of the following categories by attaching extra pages (please limit extra pages to no more than 10):

12. Justification of the criteria selected under point 9, on previous page. (Please refer to the *Criteria for Identifying Wetlands of International Importance* appended to this document)

Criterion 1 □ Huidong Harbor Sea Turtle Nature Reserve is the only nesting area for *Chelonia mydas* sea turtles in present mainland China, which is an endangered species according to the Red List. The 1,000 meter long sand beach of the Sea Turtle Bay has moderate-sized sands, a gentle slope and a silent environment, which are suitable for the sea turtles to lay eggs.

Criterion 2 □ Sea turtles have formed a migration habit during their long evolution process. They feed in food-abundant sea areas and lay eggs in secluded sand beach. Juvenile turtles then come back to and grow in the sea. This site is a significant breeding area in sea turtles' life history and therefore meets

Criterion 4: *Chelonia mydas* individuals mate in April every year. They crawl up the beach to lay eggs in the sands during June to September. It is believed that as many as 400-500 sea turtles got to the sea beach and laid 60,000-70,000 eggs every year in the past.

(According to *China National Wetlands Conservation Action Plan and Science Report of the NR*)

13. General location: (include the nearest large town and its administrative region)

The site is located in Harbor Town, Huidong County, Huizhou City, Guangdong Province.

14. Physical features: (e.g., geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate)

The site is surrounded by mountains in its east, north and west and borders the sea in the south. Its sand beach is 1,000 meter long and 70 meter wide. The hills behind the beach have a 40-50 degree slope and are composed of Mesozoic granite with diabase inclusion.

The site has a southern sub-tropical marine climate. The average annual frost-free period is 335 days; the average annual rainfall is 1,899 mm; the average annual temperature is 22.3 °C and the average annual sunshine time is 2066.7 hours. The seawater temperature ranges from 22 °C- 28 °C in summer and autumn. The average temperature difference of seawaters between day and night is at 5.55 °C. The depth of coastal waters range between 10-15 meters. Water salinity in areas deeper than 20 meters is above 3‰ all the year round. The tidal height is 1.99 meters and the tide rises and falls for twice per day. Sea currents follow different directions as the geographic conditions change. Their speeds are controlled by winds but have few seasonal differences.

15. Hydrological values: (groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.)

The site is functioning in coastal groundwater balance between fresh water and seawater, also with the role of shoreline stabilization.

16. Ecological features: (main habitats and vegetation types)

This site has a good quality sea environment and sufficient sunshine and thermal resources. It supports a wide variety of aquatic species. Investigations show that algae species include *Sargassum*, *Porphyra*, *Gracilaria verrucosa* etc; mollusc species include *Haliotis*, *Mytilacea*, *Spondylus*, *Paphia alapapilionis*, *Chicoreus ramosus*, *Strombacea*, *Ostrea* etc; fish species include *Pagrosomus*, *Sparus macrocephalus*, *Epinephelus*, *Seriola*, *Stromateoides* etc; shrimp species include *Panulirus*, *Penaeus japonicus*, *Penaeus penicillatus*, *Penaeus latisulcatus*, *Penacus semisulcatus*, *Metapenaeus*, *Metapenaecopsis* and *Scylla*

serrata, and *Holothuria*, *Echinoidea*, *Sepiacea* etc. In addition, sea cucumbers, sea urchins and cuttlefish are also found here.

17. Noteworthy flora: (indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc.)

Sea grass and semi-salt water plants are predominant in the site

(According to *China National Wetlands Conservation Action Plan* and *Science Report of the NR*)

18. Noteworthy fauna: (indicating, e.g., which species are unique, rare, endangered, abundant or biogeographically important; include count data, etc.)

The South China Sea is the major distribution area of sea turtle in China. Sea turtle resources are richest in Xisha and Nansha Archipelagoes and less rich in northern part of South China Sea. Based on records of annual catch of sea turtles in the history, it is estimated that a total of 16,800 – 46,300 sea turtles exist in the South China Sea. Among its total population, *Eretmochelys imbricata* accounts for 10%, *Dermochelys coriacea*, *Caretta caretta gigas* and *Lepidochelys olivacea* accounts for 3%. Every year total 14,000-40,000 sea turtles migrate to Xisha and Nansha Archipelagos and another 2,300-5,500 sea turtles migrate to north China Sea (including sea areas southeast to Hainan Island, coastal sea of Guangdong Province and Dongsha Archipelago). Statistics of the Huidong Harbor Sea Turtle Nature Reserve Management Station show that an annual average of 60 sea turtles come here to lay eggs in the past 15 years.

(According to *China National Wetlands Conservation Action Plan* and *Science Report of the NR*)

19. Social and cultural values: (e.g., fisheries production, forestry, religious importance, archaeological site, etc.)

The site has been delimited as a fishery protected area by local Huidong County Government, where fish are allowed to grow naturally and fries can be raised artificially. Many species naturally spawn here including *Haliotis*, *Holothuria*, *Echinoidea*, *Mytilus*, *Porphyra* and *Epinephelus*, *Panulirus*, *Penaeus*, squids, cuttlefish and crabs. Establishment of the Huidong Harbor Sea Turtle Nature Reserve has played a useful role for conservation of fishery resources in this area. Sea Turtles are traditionally regarded as a divine species and symbol of longevity and luck. They will be released back to the sea by fishermen with a feeling of reverence if they are casually caught.

Sea turtles have retained their original basic bodily form in spite of more than 200 million years of evolution. They have very important scientific values for studying evolution of the earth and organisms.

20. Land tenure/ownership of: (a) site (b) surrounding area

Boundary of Huidong Harbor Sea Turtle Nature Reserve was demarcated by Huidong County Government in 1986. Its land boundary follows a 25 meter contour line and its sea boundary is 2,000 meter away to the coastline. The Nature Reserve has got a tenure certificate for 1 km² of land.

The surrounding mountains is covered by dominant *Casuarina equisetifolia*. No farmland and villages exist in the adjacent area. The land is under collective ownership.

21. Current land use: (a) site (b) surroundings/catchment

The core area of the Nature Reserve includes sand beach and adjacent coastal sea, where human activities are strictly prohibited. It's the nesting, mating and feeding place of sea turtles. In addition, office facilities and sea turtles' hatching ponds and temporary raising ponds are also built in the core area.

The surrounding areas are mainly wild mountains. There are increasing human activities immediately outside the boundary of the Nature Reserve e.g. collecting medicinal herbs, catching snakes, livestock grazing, and logging.

22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects: (a) at the site (b) around the site

Over the years human activities have progressively got nearer to the Nature Reserve with the economic development and resources utilization in coastal zone in recent years. The present boundary was demarcated in 1986 and the area of the Nature Reserve is too small for conservation purpose. On the land area, increasing human activities nearby the boundary have caused damages to local environment. The 25 meter contour line only has a short distance to the nesting area of sea turtles and thus human activities even outside the reserve boundary easily affect their nesting environment and disturb their breeding behaviors. On the sea area, there is an increasing number of juvenile sea turtles in recent years. In the meantime, there is an increasing by-catch of sea turtles by trawl net and gill net. Illegal fishing activities e.g. using explosive and electricity are also threats to sea turtles. In addition, lack of funds is another constraint to conservation activities of the Nature Reserve.

23. Conservation measures taken: (national category and legal status of protected areas - including any boundary changes which have been made; management practices; whether an officially approved management plan exists and whether it has been implemented)

A Nature Reserve with management authority has been established to protect this site. It was a county level nature reserve when established by Huidong County Government in 1985. It was then promoted to provincial level by Guangdong Provincial Government in December 1986. In October 1992 it was promoted to national level by the State Council. The Nature Reserve Authority has 6 staff.

The Huidong County Government issued "Management Regulations on Daya Bay Aquatic Resources Nature Reserve" in 1984. The Guangdong Provincial Government established a "South China Sea Sea Turtle Resources Conservation Station" in 1985. The Huidong County Government designated its Harbor District as a Sea Turtle Nature Reserve and issued "Regulations on Harbor Sea Turtles Nature Reserve" in June 1985. The Guangdong Provincial Government issued "Regulations of Sea Turtle Resources Conservation of Guangdong Province" in May 1988. The State Council and legislation department have enacted "Wildlife Conservation Law of the People's Republic of China", "Aquatic Animal Conservation Regulations of the People's Republic of China", "Nature Reserve Management Regulations of the People's Republic of China", "Fishery Law of the People's Republic of China" and "Implementation Guidelines of Fishery Law of the People's Republic of China" since 1992. All these laws and regulations have provided solid legislative basis for conservation of sea turtles.

A lot of work has been done since the nature reserve was established. So far sea turtle catching has been prohibited and artificial incubation has been done by the nature reserve. Sea turtles can be artificially incubated when environmental conditions adversely affect natural incubation (e.g. bad weather). The artificially incubated young turtles are released to the sea after being raised for a short time.

24. Conservation measures proposed but not yet implemented: (e.g., management plan in preparation; officially proposed as a protected area, etc.)

In view of insufficient area and bad infrastructure facilities of this Nature Reserve, the Guangdong Provincial Government developed a "Huidong Harbor Sea Turtle National Nature Reserve Development Plan" in 2000 and allocated necessary funds. It was planned to

implement this Development Plan from 2001. Main activities include an expansion of its area from 4 km² to 18 km², re-zonation, improvement of infrastructure, an expansion of artificial incubation ponds of sea turtles, construction of a new sea turtle rescue house, procurement of scientific research equipment and capacity building of the staff.

25. Current scientific research and facilities: (e.g., details of current projects; existence of field station, etc.)

Currently management and scientific research sections of the Nature Reserve are just based in the field. A total of 200 m² incubation and breeding ponds have been set up. Some basic environmental analysis instruments have been equipped.

The Nature Reserve was involved in a project “Sea Turtle Survey in South China Sea” from 1987 to 1988, supported by the Ministry of Agriculture, Animal Husbandry and Fishery. Sea areas in Qilian Islet and Sea Turtle Bay in Huidong Harbor were investigated. Species identification and biological measurement were conducted for 341 sea turtles in sand beach. Egg numbers and natural hatching rates were counted for 182 nests. Total 74 marked sea turtles were released to the sea. Climate and hydrological data were collected in the investigated sites.

Experiments have been made to study artificial incubation of sea turtles since 1986. A report entitled “Experiments on Artificial Incubation and Breeding of Sea Turtles” gained a Second Class Prize of Scientific and Technological Achievements of Year 1988 of Guangdong Province, a First Class Prize of Scientific and Technological Achievements of Year 1989 of Huizhou City. Achievements of these experiments were also commended by IUCN.

26. Current conservation education: (e.g., visitors centre, hides, info booklet, facilities for school visits, etc.)

The Nature Reserve has done a lot of work in the field of public awareness and education. Local communities were involved when sea turtle survey were conducted in 1985. Discussions were made with fishermen. A video “Protect Sea Turtle – a Rare and Endangered Animal Species” were shown for local people. Some media organizations such as China Daily, People’s Central Broadcasting Station, Yangcheng Evening Paper and South China Daily reported this project many times. A scientist of International Sea Turtle Organization visited the Nature Reserve two times. Reports on the Nature Reserve were published by two American Newspapers at that time.

27. Current recreation and tourism: (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

Few tourism activities have been conducted in the Nature Reserve. Only some schools occasionally organize study tours for their students. Tourism agencies also have some occasional activities in the Nature Reserve in summer. No tourism facilities have been built.

28. Jurisdiction: (territorial, e.g. state/region, and functional, e.g. Dept of Agriculture/Dept. of Environment, etc.)

This Nature Reserve was established in 1985. It was promoted to a national level nature reserve in 1992. It is supervised by the Marine and Fishery Department of Guangdong Province.

29. Management authority: (name and address of local body directly responsible for managing the wetland)

Compiler: Huidong Harbor National Nature Reserve Management Station

Address: Gangkou Town, Huidong County, Huizhou City, Guangdong Province

No 10 Tong Fu Dong Nancunlu, Zhuhai District, Guangzhou, 510222
Tel: + 86 20 84415819 Fax: +86 20 84230056
E-mail: mbz_email@21cn.com

30. Bibliographical references: (scientific/technical only)

- (1) Li Zhonghui. *Sea Turtles in Costal South China Sea in 1955*;
- (2) Translated by Huang Zhujian et al. *Conservation Strategy of Sea Turtles in 1982*.
Marine Sciences (2): 71.
- (3) Chinese Academy of Sciences. *Marine Medicinal Organisms*. China Scientific and
Technological Press.
- (4) Wang Xiaoyan. *National Key Protected Aquatic Animals in China*. China Scientific
and Technological Press.

Please return to: **Ramsar Convention Bureau, Rue Mauverney 28, CH-1196 Gland,
Switzerland**
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • e-mail: ramsar@ramsar.org