

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:

06/21/2001

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Designation date

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Site Reference Number

2. Country:

the People's Republic of China

3. Name of wetland:

Chongming Dongtan Nature Reserve, Shanghai

4. Geographical coordinates: 121° 58' E, 31° 38' N

5. Elevation: (average and/or max. & min.) 0-5m**6. Area:** 32,600ha

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

Chongming Dongtan is located at the eastern part of the Chongming Island, which is a low lying alluvial island. Due to the sedimentation of mud and sand from the Yangtze River, Chongming Dongtan consists of large areas of fresh water/salty water marshes, tidal creeks and inter-tidal mudflat, where there are farmland, fish and crab ponds and reed beds. Because of its abundant helophyte and benthos, it becomes an important staging and wintering site for migratory birds in Asia-Pacific.

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:

3, G, F, 1

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: 1

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:

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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)

Criteria A1: Located at the mouth of the Yangtze River, one of the four longest rivers in the world, Chongming Dongtan is a typical coastal wetland ecosystem in which the bio-community is always in the process of continual succession.

Criteria B4: Chongming Dongtan, just being at the north-south flyway of the migratory birds, is a good staging and wintering site.

Criteria B2: There are 12 species of birds listed into the state protection categories, of which only whooper swan (*Cynus cygnus*) (V), Chinese merganser (*Mergus squamatus*) (R) and white-naped crane (*Grus vipio*) (V) have been recorded literally. Listed into the National first-class categories under the state protection are White stork (*Ciconia ciconia*) (E) and Hooded crane (*Grus monacha*) (E) and the second-class are Black-faced spoonbill (*Platalea minor*) (E), White spoonbill (*Platalea leucocodia*) (V), Whistling swan (*Cygnus columbianus*) (V), Common crane (*Grus grus*), White-fronted goose (*Anser albifrons*), Mandarin duck (*Aix galericulata*) (V), Little whinbrel (*Numenius borealis*) and Little green whinbrel.

Criteria B5 : Each year, millions of birds come to this site for staging and wintering. The number of geese coming for wintering reaches over 30,000 and there are 8 species of wading birds such as ring-necked plover, *Numenius madagascariensis*, *Tringa erythropus*, *Numenius arquata*, *Calidris alpina*, etc., (10% of them) staging at the site during the migratory season.

Criteria 8: This site is not only the channel for migratory fish, but also the spawning and feeding grounds for many species of fish, especially for the Chinese sturgeon.

(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)

This site is located at the Yangtze River mouth and the northeast part of Shanghai Municipality, about 46 km away from the center of the city and 48 km from the county seat of Chongming.

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)

Geology and geomorphology: The landscape of the Chongming Dongtan Wetland is formed by the sandy islands at the river mouth area of the delta plain, shoals, tidal creeks and subtidal zone.

Origin: natural

Hydrology: Chongming Dongtan is located at the shallow sea area, affected twice by the mornign and night tides. The annual average tidal range is between 2.43m and 3.08m. To its north and south sides the salt content in the water is 0.14-1.52‰ and 0.22- 0.299‰ respectively.

Soil Type: Inside the dyke: paddy field soil, gray moist soil and coastal salt soil

Outside the dyke: shoal salt soil

Tidal type: Irregu

Climate: Located at the south edge of the north subtropical zone, Chongming Dongtan is an area where the east-Asian monsoons prevail and north-westward winds in winter and the south-eastward after April. The annual average temperature is 15.3 degree C. Due to the heat effect from the surface of the waters at the east, north and south parts in winter, the temperature in the area is 1 degree C higher than the west part. The waters don't freeze. The frost-free period is 229 days and the annual average sunshine time is 2129.5 hr..

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

Chongming Dongtan is formed by the accumulation of mud and sand from the north tributary of the Yangtze River and the north water route where the tides are low. The flowing speed at the east side is slower than that at the south and north. Additionally, the flowing speed, after rising of the water, gradually becomes slow. The mud and sand accumulate with the carrying force of the water decreases, which makes

the mudflat expand towards the sea. This is of great significance to ground water recharge, sediment trapping and shoreline stabilization in the coastal areas of the Chongming Island.

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

The major vegetative types include salt vegetation and marsh vegetation. In the near coastal area, where the elevation is higher, the predominant vegetation cover is coastal salt vegetative type like *Imperata cylindrica* and *Cogongrass* community. As a result of many years' reclamation in the past, the coastal salt vegetation area becomes very small, consequently with the coastal marsh vegetation as the major one. Around they are man-made vegetative types.

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

Chongming Dongtan has many plant communities of extreme importance and wide distribution such as *Phragmites australis*, *Scirpus mariqueter*, *Scirpus triqueter* and some algae. *Scirpus mariqueter* is a unique salt species in the Yangtze River mouth area and its underground stalk and fruit are very important food to the wintering birds like white-crowned cranes, cygnets, gray cranes and some endangered species of birds.

Chongming Dongtan Bird NR Management Bureau, 2000, Master Plan of Chongming Bird NR
Shanghai Coastal Zone and Shoreline Resources Survey Team, 1998, Report on Shanghai Coastal Zones and Shoreline Resources Survey, Shanghai Science Publishing House

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

Species of Birds: According to the statistical record, there are 109 species of waterfowls (excluding birds of prey and songbirds), which fall into 16 families of 9 orders. Of those, only four are resident birds and the rest are migratory birds (including 7 species of summer migratory birds, 47 species of winter migratory birds and 50 species of travelling birds), accounting for 3.70% and 96.30% of the total respectively. There are 12 species of birds listed into the state protection categories, of which only whooper swan, Chinese merganser (*Mergus squamatus*) and white-naped crane (*Grus vipio*) have been recorded literally. Listed into the first-class categories under the state protection are White stork (*Ciconia ciconia*) and Hooded crane (*Grus nonacha*) and the second-class are Black-faced spoonbill (*Platalea minor*), White spoonbill (*Platalea leucocodia*), Whistling swan (*Cygnus columbianus*), Common crane (*Grus grus*), White-fronted goose (*Anser albifrons*), Mandarin duck (*Aix galericulata*), Little whinbrel (*Numenius borealis*) and Little green whinbrel.

Plovers and sandpipers: Plovers and sandpipers form the major communities of birds in spring and autumn with the species up to 46 and the number for transit reaching millions.

Geese and ducks: Geese and ducks are the major part of the bird population in winter with the species up to 28 mainly composed of Whistling swans geese and ducks.

Cranes: There are two species of cranes inhabiting in the Chongming Dongtan Wetland, both of them being listed into the state protection categories. Hooded cranes come for wintering and common cranes for transit.

Gulls: There are 8 species of gulls inhabiting at Chongming Dongtan and the number for wintering can be up to over 10,000 with Herring gulls (*Larus argentatus*) and Black-headed gulls (*Larus ridibundus*) as the major communities.

Animals: The survey has found some animal species such as *Mustala sibirica* and *Erinaceus europarus*.

Amphibians: According to the survey there are 8 species of amphibians like *Pelophylax nigromaculata*, *Rana limnocharis*, *Bufo bufo*, *Sinonatrix annulaeis* and *Elaphe dione*.

Fish species: Fish is important aquatic resources in Chongming Dongtan. According to the statistics from the survey conducted in 2001, there are 63 species of fish, falling into 26 families of 10 Orders, accounting for 55.26% of the total in the wetlands of Shanghai area. Of those species, the Chinese sturgeons and white sturgeons are listed as the first-class category under the state protection. The major fish species are migratory fish, brackish-water fish, and fresh water fish, intertidal area fish and sea water fish. The important economic fish species include *Mugil cephalus*, *Coilia*, *Coilia mystus*, *anguila japonica*, etc..

Benthic Animals: In the Chongming Dongtan Wetland, there 54 species of benthic animals (*benthos*), of which 26 are crustaceans, 12 mollusk, 12 species of Annelid, 1 species of coelenterates and 1 species of memertinea. The species are classified into three types: fresh water type, salt water type and brackish-water type. The important species of economic value are *Bullacta exarata*, *Eriocheir sinensis*, *Moerella iribescens*, *Metaplex longipes*, *sinonovacula constricta* and *Macrobrachium nipponense*.

Chongming Dongtan Bird NR Management Bureau, 2000, Master Plan of Chongming Bird NR
Shanghai Coastal Zone and Shoreline Resources Survey Team, 1998, Report on Shanghai Coastal Zones and Shoreline Resources Survey, Shanghai Science Publishing House
Sun Zhonghua, 1991, Establishment of Chongming Dongtan Bird NR and its Functional Zoning, Shanghai Environmental Science, Issue No.3, 1991

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

Construction and development of Chongming Dongtan has constituted an important part of the program for building Shanghai into a modern, international metropolis and enhancing its comprehensive competitiveness. Meanwhile, Chongming Dongtan can provide the city with important reserve land resources for sustainable development. Duo to its unique geographic location and abundant natural resources, Chongming Dongtan has become an excellent scenic spot for the citizens of Shanghai. Besides, it is a good site for conducting such activities as environment education, bird watching and river mouth ecosystem study. Chognming Dongtan is also an important fishery production base (*Eriocheir sinensis*, sea eels and other species of fish of economic value) and a green agricultural production base in the reclaimed land area within the sea dyke.

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

the site: state-owned: The People's Government of Shanghai Municipality has decided to transfer the jurisdiction over the inter-tidal mudflat wetland and the river mouth wetland to the Nature Reserve(NR), and the land use right of the 8,100 ha. Artificial wetland (mainly the experimental area of the Nature Reserve) to the Shanghai Industries (group) Company Ltd..

the surrounding area: state-owned/collective-owned

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

The site: inhabiting, wintering and breeding site for waterfowls; NR protection and management activities; scientific research and monitoring activities; cattle grazing grounds; harvesting of mudflat economic resources (razor clam, *Bullacta exarata*, amphibious crabs and juvenile crabs and sea eels etc.).

Surroundings/catchment: Residential area with a population of 58,412 (including the population from other places); the population from other places during the harvesting season (juvenile crabs and sea eels) being between 5000 and 7000; agricultural production, forestry production and aquaculture (eel and crab).

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

At the site:

Under the tidal influence and the sedimentation caused by the river, Chongming Dongtan has been stretching towards the sea. As a result, the birds, henthos and vegetative plants living/growing in Chongming Dongtan are always under changes, which has brought about negative factors for the habitats of the migratory birds, particularly for the wintering birds. Excessive reclamation of the mudflat area (over 130,000 mu of land reclaimed since the founding of the P.R.C.) and over herding have destroyed large areas of natural habitats, even led to the loss or segmentation of the natural habitats. All of these have exerted an unforeseeable influence to the Chongming Dongtan Wetland ecosystem.

Surroundings/catchment:

The reclaimed land at Chongming Dongtan is mainly used at present for farmland, fish ponds, road system and agricultural cultivating parks. According to the plan for construction of Shanghai industrial and real estate area, the area will cover 56.2 square km and include 10 km of road, which will lie at the

experimental zone and part of the NR buffer and core zones. Such a large scale of development (including information technology, recreation, real estate and tourism) will change the original ecological system. Additionally, there will exist possibility of pollution by farming activities and possibility of segmentation of the habitats, which will bring about great pressure to migratory birds for staging and wintering. The human activities such as planting of *Soartina anglica*, herding and burning of vegetation have severely interfered or destroyed the night site for the wintering bird: Hooded crane. The fishing activities (for young eels and crabs) all the year round at the catchment area below the low tidal level have exerted an influence over perching and food-seeking of waterfowls.

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)

In November, 1998, the Shanghai Municipal People's Government approved the establishment of Chongming Dongtan as a nature reserve. In July, 1999, the Chongming Dongtan NR was formally included in the East Asia-Australia Protected Area Network for Migratory Birds. Right now, Chongming Dongtan is actively applying for participation in the Northeast Asian Network for Migratory Cranes. Chongming Dongtan was designated as a Class A wetland of international importance in China's Biodiversity Conservation Action Plan promulgated in 1994. In China Wetland Conservation Plan, which was promulgated and implemented in 2000, Chongming Dongtan was set aside as a national important wetland and meanwhile listed as an important site of the national wetland ecological pilot project. In addition, the NR authority has separately signed an Agreement on Strengthening the Construction and Management of the Nature Reserve with the people's government of Chongming County and the Shanghai Industries (group) Company Ltd.. Active efforts have been also made to encourage the local communities to participate in the NR management activities.

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

A management plan has been developed. The NR authority has mapped out a plan for setting up the Chongming Dongtan Management Committee.

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

Current Projects: "Baseline Survey of the Chongming Dongtan Bird NR Resources in Shanghai Municipality" (2000-2001); "Statu Quo and Management of the the IMPORTANT Animals under protection in the Chongming Dongtan NR" (GEF project, Project No. GEFSRG20006) (2000-2001); "Study on Ecology for Hooded Cranes wintering in Chongming Dongtan" (2000-2001); "Establishment of a GIS for the Chongming Dongtan Wetland of International Importance". According to the plan, 5 management and protection stations and 8 wetland monitoring stations will have been set up by the end of 2001 in Chongming Dongtan. And also by that time, the NR marking system, warning signs and publicity boards will have been completed.

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

In compliance with the 1st phase project for the Chongming NR, such project activities as listed below shall have been completed by the end of 2001:

- . The Yangtze River Mouth wetland Ecology Exhibition Hall; Wetland Information Exchange Center; Environment Education Center (including a multi-function hall, a classroom and a environment education display hall) and dormitories;

- . Training courses on environment protection and national wetland conservation management to be geared to the students of the universities and colleges, middle and primary schools in Shanghai and its surrounding areas;

Creating favorable conditions for the above-said students to come for practice.

At present, the NR is preparing the training materials in cooperation with WWF and Huadong Normal University. With the financial support from WWF, a beautiful brochure introducing the NR has been printed out. For the 2nd -phase project, over 66.6ha of grounds attracting migratory birds and waders will be established in the period between 2002 and 2003, during which quite a few bird watching sheds, small tracks for environment education and training activities and tourist center will be set up.

Ch27. Current recreation and tourism: (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

Congming Dongtan has abundant tourism resources, the mudflat stretching to the horizon, rich flora and fauna resources, a tremendous number of migratory birds, fresh air, clean water and a colourful scene of the sun rising from the East Sea. With all of these, Chongming Dongtan can be seen to Shanghai, a large, modern metropolis as a last piece of land with primitive flavor and an exceptionally good scenic spot for tourists. Ecotourism and bird watching will be the major activities in Chongming Dongtan. The annual capacity of tourists shall be less than 50,000 person-times. Most tourism activities will be conducted in the pilot area and wetland park within the experiment zone.

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

Territorial jurisdiction: the People's government of Chongming County of Shanghai Municipality

Functional jurisdiction: the Bureau of Agriculture and Forestry of Shanghai Municipality

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

The Chongming Dongtan Bird NR Management Division of Shanghai Municipality

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30. Bibliographical references: (scientific/technical only)

- [1] Chongming Dongtan Bird NR Management Bureau, 2000, Master Plan of Chongming Bird NR
- [2] Shanghai Coastal Zone and Shoreline Resources Survey Team, 1998, Report on Shanghai Coastal Zones and Shoreline Resources Survey, Shanghai Science Publishing House
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- [9] Barter, M.,D. Tonkinson, S X Tang, et al., 1997, Wader number on Chongmin Dao, Yangtze estuary during northward migration and the conservation implication, Title 30: &-13
- [10] Barter M.,D. Tonkinson, el al., 1997, Shorebird number in the Chang Jiang (Yangtze River) Estury during the 1997 Northward Migration, 1997, Shorebird Survey in China (1997), Wetlands International – China Program and Wetland International _ Oceania.

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