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.

FOR OFFICE USE ONLY.

DD MM YY

Designation date

Site Reference Number

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

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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.

Shanghai Yangtze Estuarine Wetland Nature Reserve for Chinese Sturgeon

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.

Yangtze Estuarine Wetland for Chinese Sturgeon is located at the south-east-north exterior boundary of the Chongming Dongtan Nature Reserve as the west boundary, from which extending east through the whole region of the Shanghai Yangtze Estuarine Nature Reserve for Chinese Sturgeon.

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.

122º2´-122º8´E，31º28´-31º33´N

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 in the northwest to the Shanghai city, with a distance of 78 km to the urban center of Shanghai.

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

0 m (sea level).

11. Area: (in hectares)

3760 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.

The wetland is located in the estuarine area of the Yangtze River, east to the Chongming shoal island, north to the Beigang riverway in the southern branch of the Yangtze River, south close to the northern branch of the Yangtze River and west to the East Sea. The easternmost location of the wetland is the Sheshan Island. Most of the wetland is the confluence area of salt water and freshwater within 5 m deep. The uneven underwater topography is consisted of various sandy hidden shoals with different size and height. With a unique geographic location, it is identified as one of the few typical estuarine salt-fresh water wetlands in the whole China, as well as one the greatest estuarine wetlands in the world.

Located in the subtropical monsoon zone, the climate in the wetland has clearly distinctive four seasons and abundant precipitation with even seasonal distribution. The wetland has greatly fertilized bottom matters, rich aquatic biological resources and various aquacultures. It is one and

the only “kindergarten” of young individuals of the endangered species, Chinese Sturgeon (*Acipenser sinensis*), but also the unique “delivery room” and “nursing place post-partum” for the Chinese Sturgeon parents. It is the natural place where the population gathers most, the inhabiting time is the longest and all of the physiological regulations can be accomplished well in the lifecycle of Chinese Sturgeons. Therefore, it is a critical site where the population of Chinese Sturgeon might be most easily damaged. In addition, it is the important migratory channel, feeding ground and spawning site for many other fish species.

Possessed of natural habitat, representative wetland type and unique wetland function, the wetland has very rich biodiversity. Overall, as an ecological sensitive region of global significance, this wetland has great conservation value.

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.

1	2	3	4	5	6	7	8	9

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: This site is located in the estuarine area of Yangtze River, which is the third of the world and the largest in Asia-Europe continent. This site is the only access to the sea for all the matters in the Yangtze River Basin across three giant ladder landscapes, with an elevation range over 5000m, and it is also the interaction channel between land and sea. It is considered as a typical estuarine ecosystem with representative and rich biodiversity.

Criterion 2: There are 2 CR species, 2 EN species and 1 VU species in the IUCN Red List in this wetland.

Species Latin name	Chinese name	Category in the IUCN Red List	CITES Appendix	CMS Appendix	Class of national protected animal
Psephurus gladius	Baixun	CR		II	
Lipotes vexillifer	Baiqitun	CR	I		I
Acipenser sinensis	Zhonghuaxun	EN		II	I
Chelonia mydas	Lvhaigui	EN		I/II	II
Physeter macrocephalus	Moxiangjing	VU		I/II	II

Criterion 4: This wetland can provide critical refuge for Chinese Sturgeon and many other fish species. It is the breeding place of many important economic fish species such as *Collichthys lucidus*, Pampus argenteus and *Coilia mystus*.

Chinese Sturgeon is a kind of anadromous species. During its life history, most of the time is spent in the marginal sea and the Yangtze estuary of China. In July and August of every year, the breeding populations about to be mature migrate upriver from the Yangtze estuary, spend 14 to 17 months in the Yangtze River, and then spawn in the period from mid-October to mid-November in the next year. After that, the parent fish return to the sea. The young fish migrate downriver and seek foods in the shallow water of the midstream and downstream areas, reaching the Yangtze estuary by the middle and late May of the next year. The whole migration lasts for about 6 months, with a distance over 1,800 km. Along with the tides, the young Chinese Sturgeons swim back and forth, adapting to the seawater habitat progressively, feeding and increasing their weight in the shoal areas. In August and September, they enter the shallow seas to live.

Criterion 7: Hydrobionts hold the domain in this wetland. Overall, there are 332 fish species, belonging to 29 orders and 106 families. Elasmobranches hold 5 orders, 16 families and 34 species, accounting for 10.2% of the total fish species in the Yangtze estuary, within which skates (Order *Rajiformes*) have 19 species and requiem sharks (Order *Carcharhiniformes*) have 9 species. Teleosteans hold 24 orders, 90 families and 289 species, accounting for 89.8% of the total fish species in the Yangtze estuary, within which perciform fishes (Order *Perciformes*) have 38 families and 107 species, carplike fishes (Order *Cypriniformes*) have 3 families and 53 species. Tetraodontiformes（5 families and 22 species）, Pleuronectiformes（4 families and 21 species）and Scorpaeniformes（2 families and 6 species）also have relatively numerous species. According to the adaptability of the fish species to the estuary, the fish community can be divided into 4 ecotypes, which are freshwater fish (7 orders, 16 families and 76 species, accounting for 22.9% of the total species in this area), estuary-ecesis fish (9 orders, 17 families and 53 species, accounting for 16.0%), marine fish (23 orders, 83 families and 195 species, accounting for 58.7%) and migratory fish. Other monitored animals include 17 arthropods, 9 molluscs, 3 coelenterates, 5 annelids and 1 echinoderm.

Criterion 8: Due to the speciality and diversity of the ecological environment, there exists complex spatiotemporal distribution of biological identities, thus various fish habitats, migratory channels, spawning sites and feeding grounds are formed. The young fish in this site, such as *Acipenser sinensis*, *Psephurus gladius*, *Pampus argenteus*, *Pseudosciaena polyactis*, *Trichiurus haumela*, *Coilia nasus*, *Coilia mystus* are essential recruitment sources of the fishery resources in the neighbourhood areas.

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):

The Biogeography of Fauna in 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: Belonging to intertidal coast, the site is formed by the natural sedimentary deposits carried by the Yangtze water under the influence of the estuarine tides. Specifically, such accumulation landform is formed by the ebb tides in the Beigang and the northern branch riverway and the slow tides from the shadow area of the Chongming Island. The main direction of the coastal accretion is east and north.

Soil: The main soil type is sandy soil, including coastal solonchaks and fluvo-aquic soils.

Hydrology: The proper hydrologic characteristics in the site are controlled by the Yangtze runoff, tides and storm tides, categorized as irregular shallow sea semidiumal tides. The mean annual tidal range lies between 2.43 and 3.08 m with the maximal flood tidal range of 4.62 m and the maximal ebb tidal range of 4.85 m. The water depth is within 5 m. The mean annual water temperature lies between 17.01℃ and 17.4℃. The highest water temperature emerges in August when the value is 5.6-6.7℃. Windy waves take the major form of the waves in the site and ground swells take the second place.

Water quality: Influenced by the Yangtze runoff, the water body is rich in nutrients. The water quality is fine, with pH value between 6.57 and 8.38, salt concentration of 5.35‰, dissolved oxygen (DO) content between 6.63 and 10.09 mg/L, chemical oxygen demand (COD) between 1.22 and 2.78 mg/L and inorganic nitrogen content between 0.067 and 0.272 mg/L.

Climate: The mean annual temperature ranges from 15.5 to 15.8 ℃, and the mean annual sunshine duration lies between 1800 and 2000 hours. The annual frost-free period is 254 days. The mean annual precipitation is 1 083 mm while the mean annual evaporation ranges from 1 300 to 1 500 mm. The mean annual humidity is 80%. The mean annual wind speed is 3.7m/s. There are 50 fog-days in average each year.

17. Physical features of the catchment area:

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

As this wetland is located in the Yangtze estuary, the related catchment is the whole Yangtze River basin lying between 90º33´-122º25´E and 24 º30´-35º45´N with the coverage of 1.8 million

km^2. From the riverhead to the estuary, the topography spans three giant “ladders”, showing a decreasing tendency in elevation from west to east. A variety of geomorphology types include mountains, hills, basins, plateaus and plains. The mountains, plateaus and hills account for 84.7% of the Yangtze Basin, the plains account for 11.3% and the rivers and lakes account for 4%.

The whole catchment can be divided into three climate zones: the Qinghai-Tibet Alpine zone, the Southwest Tropical Monsoon zone and the Central China Subtropical Monsoon zone. The tropical monsoon zone accounts for 2/3 of the total area. The annual average precipitation in the basin is 1,100 mm, showing an increasing spatial pattern from northwest to southeast. Most of precipitation occurs between May and October, accounting for over 70%-90% of the total in a year. The annual average runoff is 9.6×10^{11} m^3, taking the third place in the world, only less than the Amazon River and the Congo River.

18. Hydrological values:

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

A large amount of sands, mud and nutrition, with relatively steady mass output every year, carried by the Yangtze water are deposited in this area. Such sedimentary deposits not only could facilitate the development of the coast, but also could maintain the nutrient level of the water body. They could play important roles in groundwater infilling, purifying water quality, stabling climate conditions and biodiversity conservation.

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:

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)

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.

F: Estuarine waters, about 3760 ha, 100% of the site.

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.

This site is the only access to the sea for all the matters in the Yangtze River Basin, and it is also the interaction channel between land and sea. A variety of complex physical, chemical and biological processes are produced by the convergence of matters from the land and the sea, the mixture of the salt and fresh water and the interaction of the runoffs and tides. Through these processes, various fish habitats, migratory channels, spawning sites and feeding grounds are formed in this site

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.***

Phytoplankton is the main plant type in the wetland, recorded phytoplankton includes 6 phylums, 68 genera and 132 species, most of which are Diatoms, including 37 genera and 93 species and accounting for 70.5% of the total. Green algaes recorded include 17 genera and 20 species, accounting for 15.2%. Dinoflagellates, cyanophytas, Xanthophytas and Euglenophytas account for 6.1%, 6.1%, 1.5% and 0.8%, respectively. The density of the phytoplankton is 2.22×106 per cubic meters.

According to the ecological characteristics, the phytoplankton in the wetland can be divided into four ecotypes which are coastal hyposaline group, estuarine semi-salt water group, off-sea hysaline group and freshwater group. The coastal hyposaline group dominates the wetland, mainly composed of temperate coastal species and eurythermal and eurysaline species. The representative species are *Coscinodiscus spinosus* (referred as Jiyuanshaizao in Chinese), *Coscinodiscus jonesianus* (referred as Qiongshiyuanshaizao in Chinese) and *Sheletonema costatum* (referred as Zhongleigutiaozao in Chinese). The off-sea hysaline group is mainly composed of high temperature tolerated eurysaline tropical species such as *Thalassiosira subtilis* (referred as Xiruohailianzao in Chinese) and *Chaetoceros lorenzianus* (referred as Luoshijiaomaozao in Chinese). The representative species of the estuarine semi-salt water group is *Melosira sulcata* (referred as Jucaozhilianzao in Chinese) which has a low population distributed in the northeast of the reserve. The freshwater group comes into the wetland along with the Yangtze runoff and has a large amount of species and wide distribution. The representative species of this group are *Melosira granulate* (referred as Kelizhilianzao in Chinese) and *Pediastrum clathratum* (referred as Panxingzao in Chinese).

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 in the wetland include fish, arthropod, mollusk, coelenterate, annelid and mammal. Fish is the dominant species in the wetland. Except those endangered species listed by IUCN, there are also lots of noteworthy animals such as *Agadina syimpsoni* (referred as Qaingjuanluo in Chinese), *Glycera chirori Izuka* (referred as Changwenshacan in Chinese), *Scapharca subcrenata* (referred as Maohan in Chinese), *Macrobraohium nipponense* (referred as Ribenzhaoxia in Chinese), *Thelonota* sp. (referred as Haishen in Chinese), *Amphiura vadicola* (referred as Tanqiyangsuizu in Chinese) and *Leiocassis longirostris* (referred as Changwenwei in Chinese).

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:

The site is located within an important fishing ground. It can play important roles in controlling the amount of fishing and the recovery of fishery resources.

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?

no

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:

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 superintendence department has the right to utilize.

b) in the surrounding area:

State ownership. The Shanghai government has the right to utilize.

25. Current land (including water) use:

a) within the Ramsar site:

Basically remain the natural status. During the fishing-permit period, lightly fishing activity under control is allowed.

b) in the surroundings/catchment:

Surrounding areas are fishing ground.

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:

Some illegal fishing activities produced negative impacts on the biological resources in the site, but the situation now is under control as the reserve set up.

b) in the surrounding area:

The shipping business could affect the surrounding wildlife under some extent.

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.

This wetland is included within the Shanghai Yangtze Estuarine Nature Reserve for Chinese Sturgeon established in 2003. The reserve is on the provincial level and covers an area of 737.6 km^2. In 2005, the superintendent rules for the reserve issued by the mayor of Shanghai and was promulgated and implemented.

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?

It was clearly expressed that the Yangtze Estuarine Nature Reserve for Chinese Sturgeon were to strive for national level in the second edition of “A three-year’s action plan for environmental protection and construction” by the Shanghai government.

d) Describe any other current management practices:

The closure management in the site has been implemented and all the fishing activities have been forbidden from 1st May to 30th September every year since 2003.
“The master plan for the Yangtze Estuarine Nature Reserve for Chinese Sturgeon” was made in 2003.
“The basic investigation and monitoring of Yangtze Estuarine Nature Reserve for Chinese Sturgeon” was put into practice in 2004.Search and rescue work for young Chinese Sturgeons has been fully taken into action. The introduction and breeding of the reserved fish parents, together with the reproduction and release of Chinese Sturgeons was carried out. Wetland monitoring was also performed in progress. For example, 330 hydrologic and meteorological data, 900 water quality data and 120 biological samples were acquired and preliminary report were completed just from the 6 field investigations and lab analysis in the first half of 2007. Regional cruise and executions of relevant laws and rules were strengthened, and rescue plans for macro-aquatic animals were made.

In collaboration with Shanghai Fishery University, the reserve conducted “Research on joint development system with communities for the Shanghai Yangtze Estuarine Nature Reserve for Chinese Sturgeon” which provided warrants for harmonious development in the site and its surroundings. Taking the Xijiagang Frontier Station as an experiment site, the reserve signed an agreement of joint development with the station, and intensified the propaganda and education activities on popular science and the implementation of policies and rules.

28. Conservation measures proposed but not yet implemented:
e.g. management plan in preparation; official proposal as a legally protected area, etc.

“Rules of Superintendency Department of Shanghai Yangtze Estuarine Nature Reserve for Chinese Sturgeon” has been put on the legislative agenda of the Standing Committee of Shanghai People’s Congress, and will be upgraded to a local law.

The infrastructural construction on Shanghai Yangtze Estuarine Nature Reserve for Chinese Sturgeon is in progress.

At present, the reserve plans to declare “Shanghai Yangtze Estuarine National Nature Reserve for Chinese Sturgeon” to enhance the protection.

29. Current scientific research and facilities:
e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

The conducted or ongoing scientific research programs are as follows:

In 2005, many research programs were carried out, which were “The fishery economic and social impacts of the closure of Nature Reserve for Chinese Sturgeon”, “Study of related legal issues on the protection of aquatic wildlife”, “The countermeasure research on illegal fishing and its rectification” and “Preliminary research on ecological environment monitoring and digital technology platform of the Yangtze Estuarine Nature Reserve for Chinese Sturgeon (0506)”.

In 2006, the reserve implemented many programs, including “Study on POP-UP marking and releasing of Chinese Sturgeon in the Yangtze Estuarine”, “Research on the natural diet composition of Chinese Sturgeon in the tidal zone of Chongming Dongtan”, “Diagnoses and control clinical medicine technologies on the main diseases of Chinese Sturgeon”, “Environmental influence monitoring of the Shanghai Yangtze River Bridge construction project on the migration of Chinese Sturgeon”, “Research on marking technologies of infant Chinese Sturgeon” and “Research on joint development system with communities for the Shanghai Yangtze Estuarine Nature Reserve for Chinese Sturgeon”.

In 2007, the reserve implemented “Research on health physiology and physiopathology on the salvage of Chinese Sturgeon” and “Fundamental research on ecological environment monitoring and ecosystem structural characters of the Yangtze Estuarine Nature Reserve for Chinese Sturgeon (0506)”.

Current equipments are as follows: YSI Dissolved Oxygen Analyzer, WAL2 Phaytoplankton Fluorescence Analyzer, Fully Automatic Ecological and Meteorological Station, TN/TP/COD Automatic Monitor, BOD Analyzer, incubators, Multi-parametric Water Quality Analyzer, Sonic Moving Doppler Current Meter, Nikon Upright Microscope and Supporting vidicon camera Device, Sartorius Electronic Balance, Zeiss Telescope, Nikon D2XS Camera, Dhipboard GPS, Automatic Embedding Equipment, PCR, Variable High Speed Freezing Centrifuge, Ultrasonic Cell Disrupter, Ultraviolet Spectrometer, Ultra-low Temperature Freezer, Noise Analyzer, SBE19 Plus Direct Reading Temperature-salinity Depth Profiler, Animal Blood Cell Analyzer, Automatic Biochemistry Analyzer, Type-B Ultrasonic device, Sight Glass, Magnetic Separation Enzyme Immune Quantitative Testing System and Fat Content Analyzer.

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 2003, a series of propaganda and education activities have been performed:

The propaganda network of the reserve is improved in progress. Besides the style changing and content extension of the website of the reserve, long term connections with the youth commission and the youth centre of each district of Shanghai have been established. A volunteer base has been established with 100 people and over 20 colleges and schools such as Tongji University, Shanghai Fisheries University and Datong High School. During the salvage of a badly injured giant Chinese Sturgeon, a temporary propaganda and education base was built in Jiading District, and 1000 children volunteers in school were organized to visit the temporary base. Through a series of activities such as propaganda of popular science on Chinese Sturgeon, visiting

the front line of salvage and support and participating in the release of the Chinese Sturgeon, the children had an opportunity to intimately contact with a national treasure.

Before the closure period and around the release period, great human resources were organized to enter the main fishery harbours and villages in Jiangsu, Zhejiang and Shanghai to develop propaganda and education activities. The reserve publicized the importance of protecting Chinese Sturgeon by printing “Notice for Fishermen” and propaganda ads and banners. Accumulative total propaganda materials reached 30 000, including “Rules of Superintendency Department of Shanghai Yangtze Estuarine Nature Reserve for Chinese Sturgeon”, “Notice for Fishermen”, posters and booklets.

The reserve strengthened the cooperation with Shanghai Ocean Aquarium, and they together held the activity of “Celebration for the healing of the Chinese Sturgeon with tens of thousand people and hundreds of schools” in which 189 schools and 88 thousand students participated. Also, a competition of painting, essay-writing and caption-assign named as “Chinese Sturgeon and I” was held, and 552 paintings, 454 essays and 352 captions were received. Through these activities, a good atmosphere of “caring about Chinese Sturgeon - starting from me, starting from around, starting from trifles” is established among the youths and children.

31. Current recreation and tourism:

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

This wetland is not used for tourism or recreation.

32. Jurisdiction:

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

Territorial: Agriculture Commission of Shanghai
Functional: Ministry of Agriculture

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.

Institution: Superintendency Department of Shanghai Yangtze Estuarine Nature Reserve for Chinese Sturgeon
Address: Floor 6, Building 3, Chifeng Road 63, Shanghai 200092
Principal: Mr. Jian Liu
Tel: +86-21-65989811
Fax: +86-21-65986899
Email: liujian@chinese-sturgeon.com.cn

34. Bibliographical references:

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

[1] Zhuang Ping, Wang Youhuai, Li Shengfa. Fish of the Yangtze delta. Science & Technology Press. 2006

[2] Ma Yun'an, Ma Zhijun. Chongming Eastern Beach International Wetland. China Forestry Publishing House. 2006

[3] Ma Chengliang. The Collection of Chongming Eastern Beach Ecological Construction Upper Forum. Tong Ji University Press.2005,9.

[4] Yang Guishan, Weng Lida, Li Lifeng. The Report on the Protection and Development of the Yangtze River. Changjiang Press. 2007

[5] Ma Yi, etc. The Essay Collection of the Protection of Biological Resources in the Yangtze River. Shanghai: The editorial committee of The Essay Collection of the Protection of Biological Resources in Changjiang. 2007, 9

[6] Chen Jiyu(editor in chief). The Comprehensive Report on Resources of Shanghai Coastal Zone and Tidal Flat. Shanghai Science & Technology Press. 1998

[7] Chen Yiyu(editor in chief). The Research on China Wetland. Ji Lin Science Press. 1995

[8] Lu Jianjian. China Wetland. East China Normal University. 1990

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