Information Sheet on EAA Flyway Network Sites (SIS) – 2017 version

Available for download from http://www.eaaflyway.net/about/the-flyway/flyway-site-network/

Categories approved by Second Meeting of the Partners of the East Asian-Australasian Flyway Partnership in Beijing, China 13-14 November 2007 - Report (Minutes) Agenda Item 3.13

Notes for compilers:

1. The management body intending to nominate a site for inclusion in the East Asian - Australasian Flyway Site Network is requested to complete a Site Information Sheet. The Site Information Sheet will provide the basic information of the site and detail how the site meets the criteria for inclusion in the Flyway Site Network. When there is a new nomination or an SIS update, the following sections with an asterisk (*), from Questions 1-14 and Question 30, must be filled or updated at least so that it can justify the international importance of the habitat for migratory waterbirds.

2. The Site Information Sheet is based on the Ramsar Information Sheet. If the site proposed for the Flyway Site Network is an existing Ramsar site then the documentation process can be simplified.

3. Once completed, the Site Information Sheet (and accompanying map(s)) should be submitted to the Flyway Partnership Secretariat. Compilers should provide an electronic (MS Word) copy of the Information Sheet and, where possible, digital versions (e.g. shapefile) of all maps.

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1. Name and contact details of the compiler of this form *:

Full name: Lu Honsheng, Director

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EAAF SITE CODE FOR OFFICE USE ONLY:

E	A	A	F	0	8	5

2. Date this sheet was completed *:

DD/MM/YYYY

01/06/2006

3. Country *:

People's Republic of China

4. Name of the Flyway Network site *:

Accepted English transcription of the Site's name.

Hengshui Lake National Nature Reserve, Hebei Province

5. Map of site *:

The most up-to-date available and suitable map of the wetland should be appended to the SIS (only in digital format and shape file). The map must clearly show the boundary of the site. Please refer to the "Digitising Site Boundaries in Google Earth" file linked here.

See Appendix 1, Figs 1 and 2.

6. Geographical coordinates (latitude/longitude, in decimal degrees) *:

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.

E115°27′50″~ 115°42′51″, N 37°31′40″~ 37°41′56″

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

18~25m

8. Area *:

The total area of the site, in hectares. If the areas of discrete site units are known, please also list each of these together with the names (or labels) used to identify and differentiate these units.

187.87 km^2

9. General overview of the site *:

A brief (two sentences) summary of the site, mentioning principal physical and ecological functions, and its importance for migratory waterbirds.

Hebei Hengshui Lake National Nature Reserve is located in north–eastern China inland of the Bohai Sea. The wetland consists of different types of freshwater habitats, including water bodies, mudflats, swamp, meadow, etc. It belongs to the continental monsoon area of the temperate zone. Hengshui Lake is a representative freshwater wetland ecosystem in the dry Northern China Plain. It has important functions of flood control, prevention of drought, climate adjustment, soil and water erosion control and assimilation of pollutants.

The wetland has a large water surface, abundant reed and cattail resources. Many kinds of fish, invertebrate and large numbers of aquatic plants provide food for waterbirds. There are 296 species of birds in the reserve, including 31 species of resident birds, 88 species of summering birds, 37 species of wintering and 140 species of passage birds. The reserve is an important stopover site for migratory birds on the East Asian - Australian Flyway. 152 species of waterbirds, which account for 52% of all birds in the reserve, have been recorded.

There are 106 villages and a population of 60 000 people in the reserve (an average of 293 people per square kilometre). Their livelihoods include fishing, reed weaving and eco-tourism. In October 2002 Hengshui Lake National Nature reserve was approved to join the China Man and Biosphere Reserve Network.

10. Justification of Flyway Site Network criteria *:

Please provide waterbird count information (with year of latest count) that demonstrates that the site meets the criteria of the Flyway Site Network (Annex 1). That is:

- it regularly supports > 20 000 migratory waterbirds; or,
- it regularly supports > 1 % of the individuals in a population of one species or subspecies of migratory waterbird; or,
- it supports appreciable numbers of an endangered or vulnerable population of migratory waterbird
- it is a "staging site" supporting > 5 000 waterbirds, or > 0.25% of a population stage at the

site.

A listing of the populations of migratory waterbirds covered by the East Asian – Australasian Flyway Partnership and the 1% thresholds is attached (Annex 3).

The "staging site" criterion is particularly difficult to apply and application of this should be discussed with the Secretariat. Also note that some species have several populations that are very difficult to distinguish in the field.

Of a total 35 species of shorebirds that use the reserve, 12 species have met the 1% criterion of international importance: Northern Lapwing, Grey-headed Lapwing, Eurasian Curlew, Marsh Sandpiper, Green Sandpiper, Common Sandpiper, Spotted Redshank, Pintail Snipe, Common Snipe, Temminck's Stint, Black-winged Stilt and Pied Avocet (see Appendix 2). Four (4) shorebird species are likely to meet the staging criteria: Oriental Plover, Black-tailed Godwit, Sharp-tailed Sandpiper and Curlew Sandpiper.

The site also supports 7 other migratory waterbird species in internationally important numbers, including: Great-crested Grebe (*Podiceps christatus*), Purple Heron (*Ardea purpurea*), Chinese Egret (*Egretta eulophotes*), Yellow Bittern (*Ixobrychus sinensis*), Black Stork (*Ciconia nigra*), Bean Goose (*Anser fabalis*) and Common Crane (*Grus grus*),

11. Wetland Types *:

List the wetland types present (see Annex 2). List the wetland types in order of their area in the Flyway Network site, starting with the wetland type with the largest area.

O,Tp, Ts, M, W

12. Jurisdiction *:

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

Hebei Hengshui Lake National Nature Reserve Management Committee manages all affairs in the reserve.

13. 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 and the title and/or name and email address/phone number of the person or persons in this office with direct responsibility for managing the wetland.

Hebei Hengshui Lake National Nature Reserve Management Committee
Address: Hebei Hengshui Lake National Nature Reserve
Telephone: 0318-2146317
Fax: 0318-2146317
Email: hshzrbhq@sina.com

14. Bibliographical references *:

A list of key technical references relevant to the wetland, including management plans, major scientific reports, and bibliographies, if such exist. Please list Web site addresses dedicated to the site or which prominently feature the site, and include the date that the Web site was most recently updated. When a large body of published material is available about the site, only the most important references need be cited, with priority being given to recent literature containing extensive bibliographies.

Asia-Pacific Migratory Waterbird Conservation Committee. (2001). Asia-Pacific Migratory Waterbird Conservation Strategy: 2001-2005. Wetlands International – Asia Pacific. Kuala Lumpur, Malaysia. 67pp

Bamford, M., Watkins, D., Bancroft, W., Tischler, G. And Wahl, J. (In Press). Migratory Shorebirds of the East Asian – Australasian Flyway: Population Estimates and

Internationally Important Sites. Wetlands International – Oceania. Canberra, Australia.

Li Hongkai et al, The Preliminary Bird Survey in Hengsui Lake Nature Reserve, Newsletter for Wetlands, Total No. 34, 2003, Wetlands International-China, 15 pp.

Master Plan of the Hengshui Lake National Nature Reserve in Hebei Province, 2004. The People's Government of Hengshui City

Scientific study report on the Hengshui Lake National Nature Reserve in Hebei Province, 2002.

Wetlands International. (2002). Waterbird Population Estimates – Third Edition. Wetlands International Global Series No.12, Wageningen, The Netherlands. 226 pp.

15. 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.

Hengshui Lake National Nature Reserve is an alluvial plain formed from the Quaternary Period and is situated near a faulted zone of Weixian-Wuyi, positioned on eastern blowups of neocathaysian geology between Hengshui and Xingtai. The northern part of the lake lies on the latitudinal faulted zone of Shijiazhuang-Julu-Hengshui. In terms of tertiary structure the reserve lies near the fringe of Nangong faultage, between the Nangong and Minghua faultage lines.

The western part of the Hengshui Lake is located on the front edge of the alluvial fan of Hutuohe River. On the east it faces the ancient bed of Yellow River, and on its west is the ancient bed of Zhanghe River. The lake basin represents a lowland in the shape of long shallow dish. The altitude of the lake bed is 18 m ASL, and is 4-5 m lower than the surrounding ground. A man-made dike divides the lake into two parts: East Lake and West Lake. The lake shore is a natural flat.

16. Physical features of the catchment area:

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

17. Hydrological values:

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

Hengshui Lake National Nature reserve is a unique and complete inland freshwater wetland system in Northern China, which plays an important role in flood control and withholding sediments. Being located in a water-shortage area of Northern China, Hengshui Lake - with capacity of 300 million m^3 and high percolation pressure - plays an important role in groundwater recharge. In the water body an increasingly large area of reed and other species of hydrophytes plays an important function in water quality control through assimilation of nutrients and pollutants.

18. General ecological features:

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

- **Lake.** In shallow areas are emerging plants such as reeds, narrowlaef cattail (*Typha angustifolia Linn*), lotus and submerged plants such as pondweed

(*Potamogeton distinctus*), common bladderwort (*Utrichlaria vulgaris*), water milfoil (*myriophyllum*) and chara (*Chara* spp.).

- **Swamp.** The main community is Saline Seepweed (*Suaeda salsa(L.) Pall*) and Capillary Wormwood (*Artemisia capillaris*).
- **Mudflat.** The mudflats of Fuyang Xunhe River are habitat for shorebirds and ducks.
- **Rivers.** Ziyahe River with a catchment area of 45 500 km^2, Fuyanghe River with a catchment area of 26 300 km^2, Fuyangxinhe River with a catchment area of 14 420 km^2, and Fudongpaihe River with a catchment area of 6429 km^2. On the southern and eastern sides of the reserve are three canals: Jima canal, Jinan canal and Weiqian canal, which connect the famous Great Canal of China.
- **Forest land.** The dominant tree species are broadleaved willow, black locust, poplar and Stughorn sumac (*Rhus typhina*)
- **Shrub.** Main species are Chinese tamarisk (*Tamarix chinensis*) and amorpha (*Amorpha fruticosa*).
- **Meadow.** Main species are Green bristlegrass (*Setaria viridis*), Windmillgrass (*Chloris*), *Aeluropus* and Cogon grass (*Imperata cylindrica*).

19. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy 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 SIS.*

(Please add here the species which do not come under sec no 14)

The most important vegetation communities are reeds, narrow leaf cattail and Saline Seepweed (*Suaeda salsa*). The water plants, such as pondweed, common bladderwort, *Najas pectincta* and chara, provide sheltered spawning habitat for fish.

20. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 10. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the SIS.*

(Please add here the species which do not come under sec no 14)

There are recorded in Hengshui Lake 296 species of birds, including 7 national protected species of Grade I and 44 national protected species of Grade II. The site includes 151 bird species that are listed under the Sino-Japan Agreement on the Protection of Migratory Birds and their habitats, and 40 bird species under the Sino-Australian Agreement on the Protection of Migratory Birds and their habitats.

Hengshui Lake being a cross-over site for many migratory birds from different species groups is important staging site for rare and endangered species in the middle-southern part of Northern China. The reserve mainly supports Palaearctic birds, but could be considered partly oriental or eurychoric realms. Migratory birds make up 89.1% of the species. Among the 296 bird species the waterbirds are dominant, in particular, cranes, anatidae, gulls and shorebirds, amounting to a hundred thousand individuals every year either staging or breeding here.

There are 7 species with Grade I Level of national protection: Red-Crowned Crane (*Grus japonensis*), Siberian White Crane (*Grus leucogeranus*), Oriental White Stork (*Ciconia boyciana*), Black Stork (*Ciconia nigra*) Great Bustard (*Otis tarda*), Golden Eagle (*Aquila chrysaetos*), Imperial Eagle (*Aquila helicaca*); and 44 national protected species of Grade II, including Whooper Swan (*Cygnus cygnus*) Whistling Swan (*Cygnus columbianus*), Mandarin Duck (*Aix galericulata*), Crane (*Grus grus*) and White-naped Crane (*Grus vipio*). Some 50 000 individuals nest in the wetlands, including Whiskered Tern (*Chlisonias hybrida*), Common Tern (*Sterna hirundo hirundo*), Black-winged Stilt (*Himantopus himantopus*), Water Rail (*Rallus aquaticus*), Moorhen (*Gallinula chloropus*), Dusky Willow Warbler (*Phylloscopus fuscatus*), Oriental Great

Reed Warbler (*Acrocephalus orientalis*) and Little Grebe (*Tachybaptus ruficollis*). Some 2 000 individuals of the Common Crane (*Grus grus*) spend winter in the reserve (December 2000), which accounts for 10% of the total in China and more than 1% of the world total. Thirty-five (35) species of shorebirds use the site, and 12 of these species have met the 1% criterion of international importance: Northern Lapwing, Grey-headed Lapwing, Eurasian Curlew, Marsh Sandpiper, Green Sandpiper, Common Sandpiper, Spotted Redshank, Pintail Snipe, Common Snipe, Temminck's Stint, Black-winged Stilt and Pied Avocet. Four (4) species are likely to meet the staging criteria: Oriental Plover, Black-tailed Godwit, Sharp-tailed Sandpiper and Curlew Sandpiper.

21. Social, economic and cultural values:

a) Describe if the site has any general social, economic 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:

Social values:

Scientific research: The wetlands of Hengshui Lake represent a form of incomplete development of the Northern China Plain. It is an important area for conservation of biodiversity and rare birds, and it serves also to have important environmental functions. Furthermore, it is of a great significance for development of wetlands science. In short, Hengshui Lake represents an ideal venue for studying the historical relationships between humans and wetlands.

Education: Hengshui Lake Nature Reserve has become an important base for education and environment protection education with the continued integrity of its wetland ecosystem and its rich biodiversity.

Tourism: The view of Hengshui Lake Nature reserve is promoted with the flowing river bends, the ancient city and the flocks of birds as "three unique features", to attract people for birdwatching and scenic tours.

Water supply: Hengshui Lake provides water for agricultural and industrial use by Hengshui City and Jizhou City.

Fishery: Annual output of fish from Hengshui Lake is 2000 t.

Cultural values:

The wetlands of Hengshui Lake form part of the origins of culture of ancient Jizhou City. It is said that "Among the nine cities in the world, Jizhou must be first". Today within the border of the reserve there are still in existence fragments of the city wall built in the Han Dynasty (206 B.C-220 A.D), many ancient tumulus, steles and josses. Tourism and fishery activities are consistent with the maintenance of natural wetland processes and ecological character.

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? (Double-click the checkbox to check and choose "Checked" under "Default Value" from "Check Box Form Field Options" window)

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: ☐

22. Land tenure/ownership:

a) Within the Flyway Network site:

The water body, swamp and mudflat within Hengshui Lake area are owned by the State, but the use rights (tenure) belong to the inhabitants of the surrounding area.

b) In the surrounding area:

The land in the surrounding area is owned by collectives (communities), but the use rights (tenure) belong to the inhabitants.

23. Current land (including water) use:

a) Within the Flyway Network site:

The land use within the wetland is mainly concentrated on fishery and reed production, and the mudflats of Fuyang Xunhe River have been used as habitats for shorebirds and ducks. The catchment has been used mainly for agriculture.

b) In the surroundings/catchment:

Land use of the surrounding area has been concentrated on agricultural and forestry activities. For the time being agriculture, forestry and industry water use have had no impact on water quality and shrinkage of the wetland area.

24. 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 Flyway Network site:

Hengshui Lake, being located in dry area of Northern China Plain, is at some risk of shrinking. Unsustainable fishing may cause decreases in fish stocks, thus reducing local fisheries

b) In the surrounding area:

In the surrounding area, development and urbanization of up-stream areas, sewage and industrial waste water may pollute river wetlands.

25. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Flyway Network 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.

The Hengshui Lake National Nature Reserve was approved and set up in June 2003 by State Council. The area of the reserve is 188 km^2 with a clearly defined boundary and record of land ownership/tenure. Some management stations have been established for assisting daily management and patrols.

The People's Government of Hengshui City promulgated a legally binding instrument entitled "**Management Rules of Hengshui Lake National Nature Reserve in Hebei Province**", which authorized the Administration Office of the reserve to manage the reserve entirely. and invited Qinghua University, Beijing University, Beijing Forestry University and Chinese Academy of Sciences to formulate a Master Plan of Hengshui Lake National Nature Reserve in Hebei Province, including management planning. This Plan can be considered a strategic planning document for wise use of natural resources in the reserve and sustainable development of surrounding communities.

The Administration Office of the reserve has conducted a series of intensive and broad public awareness campaigns and education activities, and guides restructure of local industries with an aim to promote development of the local economy. The surrounding

communities strongly support the activities of the reserve, thus assisting a strong level of protection and wise use of resources in 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, see Annex 3):

Ia ☐; Ib ☐; II ☐; III ☐; IV ☐; V ☐; VI ☐; N/A ☐

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

If yes, is it being implemented?: If no, is one being planned?

d) Describe any other current management practices:

26. Conservation measures proposed but not yet implemented:

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

The "**Management Regulations for Hengshui Lake National Nature Reserve in Hebei Province**" is under the process of formulation.

27. Current scientific research and facilities:

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

Under the Administration Office a research section has been set up, which has established a long term cooperation mechanism with Chinese Academy of Sciences, Qinghua University, Beiijng Normal University, Chinese Academy of Forestry and Hebei Normal University. They jointly conduct monitoring and research on: (1) habitats and key protected birds; (2) abundance of water plants and its impact on water quality; and (3) wetlands benefits and functions. Two working stations are set up at Shengtou and Youti of Fuyang Xunhe River.

The facilities for research use include personal computers, binoculars, cameras and vidicon (video camera).

28. 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.

Hengshui Lake National Nature Reserve is an important base for conducting education and environmental education due to its complete wetland ecosystem and rich biodiversity. In 2005, Hengshui Lake National Nature Reserve was confirmed as The Education Base of China Wild Animal Protection Science Dissemination. The following education activities have been conducted:

"Selected Laws and Rules Related to the Conservation of Wetlands " compiled by the Administration Office of Hengshui Lake National Nature Reserve in Hebei Province have been printed and disseminated to volunteers, students and local communities free of charge. The related awareness activities have also been carried out.

A beautiful pictorial album of the reserve has been printed that contains natural resources, history, human development, wetland functions and benefits.

A CD has been made, which describes various natural resources, especially bird resources, and conservation efforts done by the reserve. Through viewing the CD people can enjoy the beautiful natural landscape and learn about the long history and culture of the reserve area.

Scientific Study Report on the Hengshui Lake National Nature Reserve in Hebei Province, Master Plan of the Hengshui Lake National Nature Reserve in Hebei Province and Management Plan of the Hengshui Lake National Nature Reserve have been printed.

29. Current recreation and tourism:

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

Hengshui Lake is known for its water landscape of unique scenes: ancient city and bird flocks. Therefore, it is of high value in terms of sightseeing and tourism. Although the Hengshui Lake reserve has rich tourism resources, the tourism is only in its beginning stages. The main tourist activities currently are sightseeing, birdwatching and fishing (angling).

A Hengshui Lake tourist service center was registered in 2003 with responsibility for unified management of tourist activities in the area of the lake.

30. Threats *:

Which of the following threats is present historically – when the threat stopped but the effects are still there (H), currently (C) or potentially (P)?

	Historically	Currently	Potentially
Residential and commercial development			
housing and urban areas	☐	☐	☐
commercial and industrial areas	☐	☐	☐
tourism and recreation areas	☐	☐	☐
Agriculture and aquaculture			
annual and perennial non-timber crops	☐	☐	☐
wood and pulp plantations	☐	☐	☐
livestock farming and ranching	☐	☐	☐
marine and freshwater aquaculture	☐	☐	☐
Energy production and mining			
oil and gas drilling	☐	☐	☐
mining and quarrying	☐	☐	☐
renewable energy	☐	☐	☐
Transportation and service corridors			
roads and railroads	☐	☐	☐
utility and service lines	☐	☐	☐
shipping lanes	☐	☐	☐
flight paths	☐	☐	☐

Biological resource use			
hunting and collecting terrestrial animals	☐	☐	☐
gathering terrestrial plants	☐	☐	☐
logging and wood harvesting	☐	☐	☐
fishing and harvesting aquatic resources	☐	☐	☐
Human intrusions and disturbance			
recreational activities	☐	☐	☐
war, civil unrest and military exercises	☐	☐	☐
work and other activities	☐	☐	☐
Natural system modifications			
fire and fire suppression	☐	☐	☐
dams and water management/use	☐	☐	☐
other ecosystem modifications	☐	☐	☐
Invasive and other problematic species and genes			
invasive non-native/alien species	☐	☐	☐
problematic native species	☐	☐	☐
introduced genetic material	☐	☐	☐
Pollution			
household sewage and urban waste water	☐	☐	☐
industrial and military effluents	☐	☐	☐
agricultural and forestry effluents	☐	☐	☐
garbage and solid waste	☐	☐	☐
air-borne pollutants	☐	☐	☐
excess energy	☐	☐	☐
Geological events			
volcanoes	☐	☐	☐
earthquakes/tsunamis	☐	☐	☐
avalanches/landslides	☐	☐	☐
Climate change and severe weather			
habitat shifting and alteration	☐	☐	☐
droughts	☐	☐	☐

temperature extremes	☐	☐	☐
storms and flooding	☐	☐	☐

Please write here any additional threats and comments/queries you have on the threats.

Annex 1: Criteria for the inclusion of sites in the Flyway Site Network

(From the Partnership Text)

To be considered for inclusion in the Flyway Site Network, this Partnership adopts the following criteria:

a. Convention on Wetlands (Ramsar, Iran, 1971) criteria for internationally important sites for migratory waterbirds. That is:
   - Criterion 2: A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.
   - Criterion 5: A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds.
   - Criterion 6: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

b. The staging criteria as applied under the Asia - Pacific Migratory Waterbird Conservation Strategy. That is:
   i. A staging site should be considered internationally important if it regularly supports 0.25% of individuals in a population of one species or subspecies of waterbirds on migration.
   ii. A staging site should be considered internationally important if it regularly supports 5,000 or more waterbirds at one time during migration.

c. Under exceptional circumstances a site can be nominated if it supports migratory waterbirds at a level or stage of their life cycle important to the maintenance of flyway populations. Justification of such nominations will be considered by the Partnership on a case by case basis.

Annex 2: Ramsar Classification System for Wetland Type

The codes are based upon the Ramsar Classification System for Wetland Type as approved by Recommendation 4.7 and amended by Resolutions VI.5 and VII.11 of the Conference of the Contracting Parties. The categories listed herein are intended to provide only a very broad framework to aid rapid identification of the main wetland habitats represented at each site.

To assist in identification of the correct Wetland Types to list in section 19 of the RIS, the Secretariat has provided below tabulations for Marine/Coastal Wetlands and Inland Wetlands of some of the characteristics of each Wetland Type.

Marine/Coastal Wetlands

A -- **Permanent shallow marine waters** in most cases less than six metres deep at low tide; includes sea bays and straits.
B -- **Marine subtidal aquatic beds**; includes kelp beds, sea-grass beds, tropical marine meadows.
C -- **Coral reefs**.
D -- **Rocky marine shores**; includes rocky offshore islands, sea cliffs.
E -- **Sand, shingle or pebble shores**; includes sand bars, spits and sandy islets; includes dune systems and humid dune slacks.
F -- **Estuarine waters**; permanent water of estuaries and estuarine systems of deltas.
G -- **Intertidal mud, sand or salt flats**.
H -- **Intertidal marshes**; includes salt marshes, salt meadows, saltings, raised salt marshes; includes tidal brackish and freshwater marshes.
I -- **Intertidal forested wetlands**; includes mangrove swamps, nipah swamps and tidal freshwater swamp forests.
J -- **Coastal brackish/saline lagoons**; brackish to saline lagoons with at least one relatively narrow connection to the sea.
K -- **Coastal freshwater lagoons**; includes freshwater delta lagoons.
Zk(a) – **Karst and other subterranean hydrological systems**, marine/coastal

Inland Wetlands

L -- **Permanent inland deltas**.
M -- **Permanent rivers/streams/creeks**; includes waterfalls.
N -- **Seasonal/intermittent/irregular rivers/streams/creeks**.
O -- **Permanent freshwater lakes** (over 8 ha); includes large oxbow lakes.
P -- **Seasonal/intermittent freshwater lakes** (over 8 ha); includes floodplain lakes.
Q -- **Permanent saline/brackish/alkaline lakes**.
R -- **Seasonal/intermittent saline/brackish/alkaline lakes and flats**.
Sp -- **Permanent saline/brackish/alkaline marshes/pools**.
Ss -- **Seasonal/intermittent saline/brackish/alkaline marshes/pools**.
Tp -- **Permanent freshwater marshes/pools**; ponds (below 8 ha), marshes and swamps on inorganic soils; with emergent vegetation water-logged for at least most of the growing season.
Ts -- **Seasonal/intermittent freshwater marshes/pools on inorganic soils**; includes sloughs, potholes, seasonally flooded meadows, sedge marshes.
U -- **Non-forested peatlands**; includes shrub or open bogs, swamps, fens.
Va -- **Alpine wetlands**; includes alpine meadows, temporary waters from snowmelt.
Vt -- **Tundra wetlands**; includes tundra pools, temporary waters from snowmelt.
W -- **Shrub-dominated wetlands**; shrub swamps, shrub-dominated freshwater marshes, shrub carr, alder thicket on inorganic soils.
Xf -- **Freshwater, tree-dominated wetlands**; includes freshwater swamp forests, seasonally flooded forests, wooded swamps on inorganic soils.
Xp -- **Forested peatlands**; peatswamp forests.
Y -- **Freshwater springs; oases**.
Zg -- **Geothermal wetlands**
Zk(b) – **Karst and other subterranean hydrological systems**, inland

Note: "**floodplain**" is a broad term used to refer to one or more wetland types, which may include examples from the R, Ss, Ts, W, Xf, Xp, or other wetland types. Some examples of floodplain wetlands are seasonally inundated grassland (including natural wet meadows), shrublands, woodlands and forests. Floodplain wetlands are not listed as a specific wetland type herein.

Human-made wetlands

1 -- **Aquaculture** (e.g., fish/shrimp) **ponds**
2 -- **Ponds**; includes farm ponds, stock ponds, small tanks; (generally below 8 ha).
3 -- **Irrigated land**; includes irrigation channels and rice fields.
4 -- **Seasonally flooded agricultural land** (including intensively managed or grazed wet meadow or pasture).

5 -- **Salt exploitation sites**; salt pans, salines, etc.
6 -- **Water storage areas**; reservoirs/barrages/dams/impoundments (generally over 8 ha).
7 -- **Excavations**; gravel/brick/clay pits; borrow pits, mining pools.
8 -- **Wastewater treatment areas**; sewage farms, settling ponds, oxidation basins, etc.
9 -- **Canals and drainage channels, ditches.**
Zk(c) -- **Karst and other subterranean hydrological systems**, human-made

Annex 3: IUCN Protected Areas Categories System

IUCN protected area management categories classify protected areas according to their management objectives. The categories are recognised by international bodies such as the United Nations and by many national governments as the global standard for defining and recording protected areas and as such are increasingly being incorporated into government legislation.

Ia Strict Nature Reserve
Category Ia are strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphical features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values.

Ib Wilderness Area
Category Ib protected areas are usually large unmodified or slightly modified areas, retaining their natural character and influence without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.

II National Park
Category II protected areas are large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible, spiritual, scientific, educational, recreational, and visitor opportunities.

III Natural Monument or Feature
Category III protected areas are set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove. They are generally quite small protected areas and often have high visitor value.

IV Habitat/Species Management Area
Category IV protected areas aim to protect particular species or habitats and management reflects this priority. Many Category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.

V Protected Landscape/ Seascape
A protected area where the interaction of people and nature over time has produced an area of distinct charcter with significant, ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.

VI Protected area with sustainable use of natural resources
Category VI protected areas conserve ecosystems and habitats together with associated cultural values and traditional natural resource management systems.

Appendix 1: Location and zone maps for Hebei Hengshui Lake National Nature Reserve.

Figure 1. Location map of Hengshui Lake National Nature Reserve, Hebei Province.

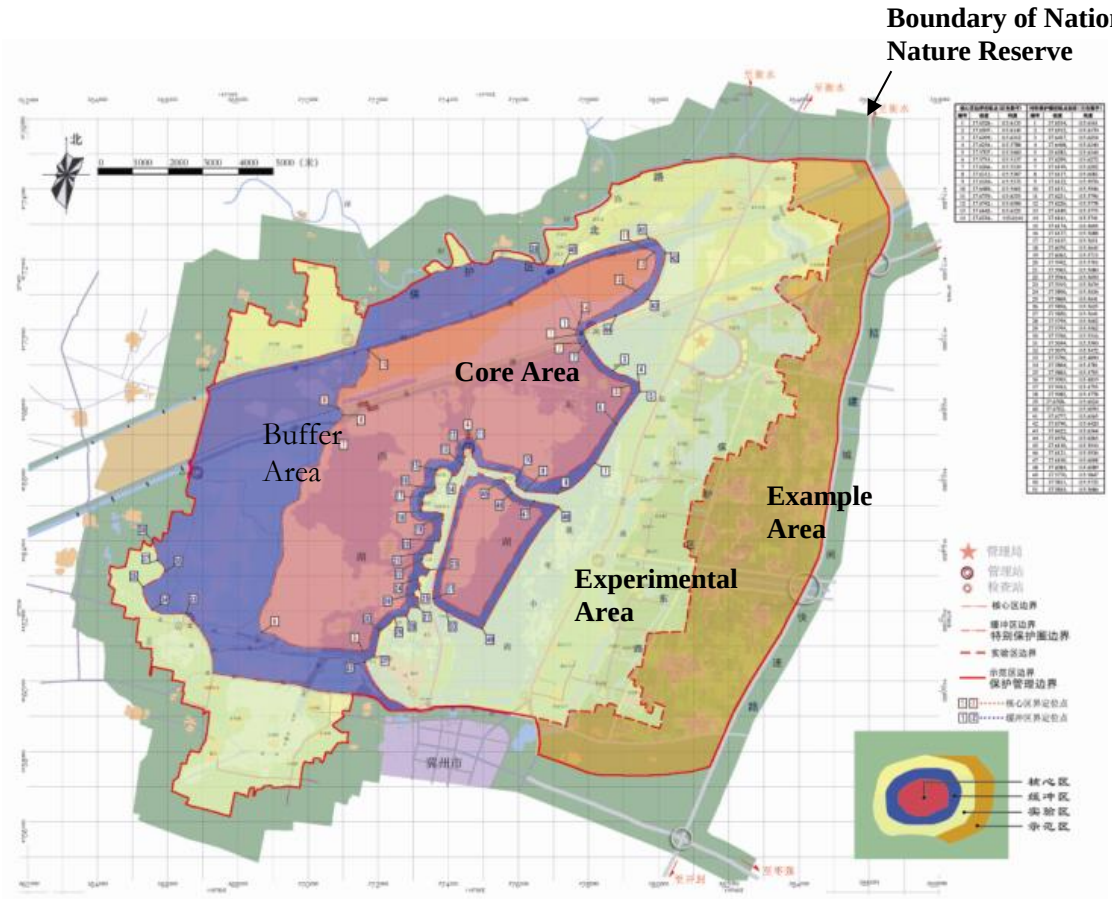

Figure 2. Functional area map of Hengshui Lake National Nature Reserve

Appendix 2: Peak counts of all shorebirds recorded in 2004-2006 at Hengshui Lake NNR. Internationally important concentrations in bold underlined red (meet the 1% threshold) or bold italics blue (meet the 0.25% staging criteria).

No.	Chinese name	English Name	Scientific Name	Date	Site	Peak Counts‡	1% and (0.25%) Thresholds *	Reference
1	水雉	Pheasant-tailed Jacana	*Hydrophasianus chirurgus*	27/06/2004	Water area	8	250	Li Hongkai
2	彩鹬	Painted Snipe	*Rostratula benghalensis benghalensis*	20/07/2004	Water area	26	250	Ma Qian
3	**凤头麦鸡**	**Northern Lapwing**	***Vanellus vanellus***	**16/04/2004**	**Mudflat, farmland, water area**	**1200**	**1000**	**Li Hongkao**
4	**灰头麦鸡**	**Grey-headed Lapwing**	***Vanellus cinereus***	**03/08/2005**	**Mudflat, farmland, water area**	**1500**	**250**	**Li Hongkai, Yang Jian**
				23/06/2004	**farmland**	**1100**	**250**	**Li Hongkai**
5	蒙古沙鸻	Lesser Sand Plover	*Charadrius mongolus*	25/04/2004	Mudflat	170	1400	Li Hongkai
6	金眶鸻	Little Ringed Plover	*Charadrius dubius curonicus*	23/06/2004	Water area	100	250 (63)	Ma Qian, Yang Jian
7	环颈鸻	Kentish Plover	*Charadrius alexandrinus*	23/06/2004	Water area	200	1100	Ma Qian, Yang Jian
8	***红胸鸻***	***Oriental Plover***	***Charadrius veredus***	***19/04/2005***	***Water area***	***230***	***700 (175)***	***Li Hongkai***
9	中杓鹬	Whimbrel	*Numenius phaeopus variegatus*	18/09/2004	Mudflat, farmland, water area	120	1000	Li Hongkai, He Xiyong
10	**白腰杓鹬**	**Eurasian Curlew**	***Numenius arquata orientalis***	**19/04/2005**	**Mudflat, farmland, water area**	**400**	**400**	**Li Hongkai, Ma Qian**
11	红腰杓鹬	Far Eastern Curlew	*Numenius madagascariensis*	25/04/2004	Mudflat, farmland, water area	25	380	Li Hongkai
12	***黑尾塍鹬***	***Black-tailed Godwit***	***Limosa limosa melanuroides***	***11/04/2005***	***Water area***	***1200***	***1600 (400)***	***Yang Jian, Ma Qian`***
13	红脚鹬	Common Redshank	*Tringa totanus*	19/04/2005	Water area	200	750 (188)	Li Hongkai, Ma

No.	Chinese name	English Name	Scientific Name	Date	Site	Peak Counts‡	1% and (0.25%) Thresholds *	Reference
								Qian
14	泽鹬	Marsh Sandpiper	*Tringa stagnatilis*	25/04/2004	Water area	1000	900	Li Hongkai
15	青脚鹬	Common Greenshank	*Tringa nebularia*	11/04/2005	Water area	120	600	Yang Jian, Ma Qian
16	白腰草鹬	Green Sandpiper	*Tringa ochropus*	25/04/2004	Water area	400	250	Li Hongkai
17	林鹬	Wood Sandpiper	*Tringa glareola*	28/04/2005	Water area	210	1000	Ma Qian, He Xiyong
18	矶鹬	Common Sandpiper	*Tringa hypoleucos*	08/07/2005	Mudflat, farmland, water area	350	250	Yang Jian, He Xiyong
19	鹤鹬	Spotted Redshank	*Tringa erythropus*	11/04/2005	Mudflat, swamp	290	250	Yang Jian, Ma Qian
				25/04/2004	swamp	250	250	Li Hongkai
20	半蹼鹬	Asian Dowitcher	*Limnodromus semipalmatus*	11/04/2005	Water area	56	240	Yang Jian, Ma Qian
21	孤沙锥	Solitary Snipe	*Gallinago solitaria*	23/04/2006	Water area	13	100	Li Hongkai
22	针尾沙锥	Pintail Snipe	*Gallinago stenura*	19/04/2005	Mudflat, farmland, water area	300	250	Li Hongkai, Ma Qian
23	扇尾沙锥	Common Snipe	*Gallinago gallinago gallinago*	19/04/2005	Mudflat, farmland, water area	1200	1000	Li Hongkai, Ma Qian
24	丘鹬	Eurasian Woodcock	*Scolopax rusticola*	08/07/2005	Mudflat, farmland, water area	120	250	Yang Jian, He Xiyong
25	红腹滨鹬	Red Knot	*Calidris canutus*	23/04/2006	Water area	150	2200	Li Hongkai
26	长趾滨鹬	Long-toed Stint	*Calidris subminuta*	28/04/2005	Water area	27	250	Ma Qian, He Xiyong
27	乌脚滨鹬(青脚滨	Temminck's Stint	*Calidris temminckii*	25/04/2004	Water area	350	250	Li Hongkai

No.	Chinese name	English Name	Scientific Name	Date	Site	Peak Counts‡	1% and (0.25%) Thresholds *	Reference
	鹬)							
28	尖尾滨鹬	Sharp-tailed Sandpiper	Calidris acuminata	28/04/2005	Water area	1500	1600 (400)	Ma Qian, He Xiyong
29	弯嘴滨鹬	Curlew Sandpiper	Calidris ferruginea	11/04/2005	Water area	1200	1800 (450)	Yang Jian, Ma Qian
30	黑腹滨鹬	Dunlin	Calidris alpina	23/04/2006	Water area	120	9 500	Li Hongkai
31	三趾鹬	Sanderling	Calidris alba	11/04/2005	Water area	9	220	Yang Jian, Ma Qian
32	阔嘴鹬	Broad-billed Sandpiper	Limicola falcinellus sibirica	25/04/2004	Water area	18	250	Li Hongkai
33	黑翅长脚鹬	Black-winged Stilt	Himantopus himantopus himantopus	08/07/2005	Water area	3000	250	Yang Jian, He Xiyong
				02/08/2004	River, swamp	1900	250	Li Hongkai, Ma Qian
				27/05/2004	Mudflat, swamp	1200	250	Yang Jian, Ma Qian
34	反嘴鹬	Pied Avocet	Recurvirostra avosetta	17/09/2004	Water area	350	250	Li Hongkai, Ma Qian
35	普通燕鸻	Oriental Pratincole	Glareola maldivarum	08/07/2005	Water area	300	20 000	Yang Jian, He Xiyong

* Population estimates, 1% thresholds and 0.25% (staging) criteria from Wetlands International (2002) and Bamford *et al* (In Press).

‡ Maximum Counts from Hengshui Lake National Nature Reserve database.

Appendix 3: Peak counts of other waterbirds recorded in 2004-2005 at Hengshui Lake NNR.

Internationally important concentrations (meet the 1% threshold) are in bold underlined red.

No.	Chinese name	English Name	Scientific Name	Date	Site	Peak Counts‡	1% criterion *	Reference
1	小䴙䴘	Little Grebe	*Tachybaptus ruficollis*	27/06/2004	Water area	4100	10 000	Li Hongkai
2	黑颈䴙䴘	Black-necked Grebe	*Podiceps nigricollis*	27/06/2004	Water area	240	1 000	Li Hongkai
3	**凤头䴙䴘**	**Great-crested Grebe**	***Podiceps christatus***	**20/07/2004**	**Water area**	**325**	**250**	**Ma Qian**
4	普通鸬鹚	Great Cormorant	*Phalacrocorax carbo*	27/06/2004	water area	360	1000	Li Hongkai
5	苍鹭	Grey Heron	*Ardea cinerea*	20/07/2004	Mudflat, swamp, water area	1700	10 000	Ma Qian
6	大白鹭	Eastern Great Egret	*Ardea modesta*	25/09/2005	Mudflat, swamp, water area	140	1 000	Li Hongkai Ma Qian
7	中白鹭	Intermediate Egret	*Ardea intermedia*	25/09/2005	Mudflat, swamp, water area	100	1 000	Li Hongkai Ma Qian
8	**草鹭**	**Purple Heron**	***Ardea purpurea***	**23/06/2004**	**Mudflat, swamp, water area**	**1200**	**1 000**	**Ma Qian, Yang Jian**
9	牛背鹭	Cattle Egret	*Ardea ibis*	23/06/2004	swamp,	110	10 000	Ma Qian Yang Jian
10	绿鹭	Striated Heron	*Butorides striatus*	08/07/2005	swamp,	36		Yang Jian, He Xiyong
11	池鹭	Chinese Pond-Heron	*Ardeola bacchus*	19/04/2005	Mudflat, swamp	84	1000	Li Hongkai, Ma Qian
12	白鹭	Little Egret	*Egretta garzetta*	25/09/2005	Mudflat, swamp, water area	1300	10 000	Li Hongkai, Ma Qian
13	**黄嘴白鹭**	**Chinese Egret**	***Egretta eulophotes***	**25/09/2005**	**Mudflat, swamp, water area**	**43**	**30**	**Li Hongkai, Ma Qian**
14	夜鹭	Black-crowned Night-Heron	*Nycticorax nycticorax*	08/07/2005	Mudflat, swamp	92	10 000	Yang Jian He

No.	Chinese name	English Name	Scientific Name	Date	Site	Peak Counts‡	1% criterion *	Reference
								Xiyong
15	大麻千干鸟	Eurasian Bittern	*Botaurus stellaris*	18/06/2004	water area	31	1 000	Li Hongkai Yang Jian
16	**黄斑苇鳽**	**Yellow Bittern**	***Ixobrychus sinensis***	**18/06/2004**	**Water area**	**11 200**	**10 000**	**Li Hongkai, Yang Jian**
17	**黑鹳**	**Black Stork**	***Ciconia nigra***	**05/11/2004**	**Swamp**	**1**	**1**	**Li Hongkai, Ma Qian**
18	东方白鹳	Oriental White Stork	*Ciconia boyciana*	05/11/2004	Water area	5	30	Li Hongkai Ma Qian
19	白琵鹭	Eurasian Spoonbill	*Platalea leucorodia*	25/04/2004	Swamp, mudflat	25	65	Li Hongkai
20	大天鹅	Whooper Swan	*Cygnus cygnus*	25/09/2005	Water area	52	600	Li Hongkai Ma Qian
21	小天鹅	Tundra Swan	*Cygnus columbianus*	25/09/2005	Water area	410	860	Li Hongkai Ma Qian
22	鸿雁	Swan Goose	*Anser cygnoides*	08/12/2004	farmland	140	550	Yang Jian, He Xiyong
23	**豆雁 [1]**	**Bean Goose[1]**	***Anser fabalis*[1]**	**08/12/2004**	**farmland**	**2400**	**600/550**	**Yang Jian, He Xiyong**
24	白额雁	Greater White-fronted Goose	*Anser albifrons*	08/12/2004	farmland	160	1 300	Yang Jian, He Xiyong
25	灰雁	Grey-lag Goose	*Anser anser*	02/08/2005	Water area	16	750	Li Hongkai, Ma Qian
26	赤麻鸭	Ruddy Shelduck	*Tadorna ferruginea*	25/04/2004	Water area, river	150	750	Li Hongkai
27	鸳鸯	Mandarin Duck	*Aix galericulata*	08/07/2005	water area	14	200	Yang Jian, He Xiyong
28	绿翅鸭	Common Teal	*Anas crecca*	19/04/2005	water area river	1700	8 000	Li Hongkai

No.	Chinese name	English Name	Scientific Name	Date	Site	Peak Counts‡	1% criterion *	Reference
								, Ma Qian
29	绿头鸭	Mallard	*Anas platyrhynchos*	19/04/2005	River, water area	630	15 000	Li Hongkai, Ma Qian
30	斑嘴鸭	Spot-billed Duck	*Anas poecilorhyncha*	25/04/2004	Water area,river,	1800	12 000	Li Hongkai
31	针尾鸭	Northern Pintail	*Anas acuta*	28/04/2005	Water area river	260	7 500	Ma Qian, He Xiyong
32	白眉鸭	Garganey	*Anas querquedula*	25/04/2004	Water area river	190	10 000	Li Hongkai
33	琵嘴鸭	Northern Shoveler	*Anas clypeata*	28/04/2005	Water area river	360	7500	Ma Qian, He Xiyong
34	白眼潜鸭	Feruginous Pochard	*Aythya nyroca*	28/04/2005	Water area	45		Ma Qian, He Xiyong
35	红头潜鸭	Common Pochard	*Aythya ferina*	19/04/2005	Water area river	290	8 000	Li Hongkai, Ma Qian
36	普通秋沙鸭	Goosander	*Mergus merganser*	05/11/2004	Water area	130	750	Li Hongkai Ma Qian
37	白鹤	Siberian Crane	*Grus leucogeranus*	08/12/2004	Swamp	3	30	Yang Jian, He Xiyong
38	**灰鹤**	**Common Crane**	***Grus grus***	**08/12/2004**	**farmland**	**960**	**110**	**Yang Jian, He Xiyong**
39	普通秧鸡	Water Rail	*Rallus aquaticus*	08/07/2005	Water area	820		Yang Jian, He Xiyong
40	黑水鸡	Common Moorhen	*Gallinula chloropus*	08/07/2005	Water area, swamp	12 000		Yang Jian, He Xiyong
41	骨顶鸡	Common Coot	*Fulica atra*	08/07/2005	Mudflat, swamp	1900		Yang Jian, He Xiyong
42	小田鸡	Baillon's Crake	*Porzana pusilla*	18/06/2004	water area	640		Li Hongkai Yang

No.	Chinese name	English Name	Scientific Name	Date	Site	Peak Counts‡	1% criterion *	Reference
								Jian
43	红胸田鸡	Ruddy-breasted Crake	*Porzana fusca*	18/06/2004	water area	160		Li Hongkai Yang Jian
44	红嘴鸥	Common Black-headed Gull	*Larus ridibundus*	02/08/2005	Water area	4100		Li Hongkai, Ma Qian
45	须浮鸥	Whiskered Tern	*Chlidonias hybridus*	08/07/2005	Water area	18000		Yang Jian, He Xiyong
46	白翅浮鸥	White-winged Tern	*Chlidonias leucopterus*	08/07/2005	Water area	820		Yang Jian, He Xiyong

‡ Maximum Counts from Hengshui Lake National Nature Reserve database.

* Flyway Population Estimates and 1% criteria from: Wetlands International 2002. Waterbird Population Estimates – Third Edition. Wetlands Global Series No. 12, Wageningen, The Netherlands. 资料来源：湿地国际 2002 ：水鸟数量评估——第三版，全球湿地系列丛书第 12 册，瓦格宁根，荷兰

1 middendorfi and serrirostris subspecies occur in E China. 豆雁的两个亚种 middendorfi 和 serrirostris 分布在中国东部地区。