

**Designation date: 11/01/2002      Ramsar Site no. 1151**

## **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:**

Nan Dongting Wetland and Waterfowl Nature Reserve

#### **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:**

Due to the damming of the Three Gorges Project, the water level of Nan Dongting Lake descended.

The Ramsar Criteria remain unchanged.

**7. Map of site:**

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

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

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

**b) Describe briefly the type of boundary delineation applied:**

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

The boundary of the site is unchanged, which is the same as the Nan Dongting Lake Nature Reserve. It lies between the two shores of the Yangtze River, holding outlets of Xiang River in the east and Zi River in the South.

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

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

Center: 28°50'N, 112°40'E

Extent: 28°35'-29°10'N, 112°19'-112°57'E

**9. General location:**

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

The Nan Dongting Wetland and Waterfowl Nature Reserve lies in the southwest part of Dongting Lake, being located in Yiyang City, Hunan Province, which is 25 kilometers away from Yiyang City.

**10. Elevation:** (in meters: average and/or &)

Average: 30 m; maximum: 33.5 m; minimum: 28.5m

**11. Area:** (in hectares)

168,000 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.

This site is located in the south of Dongting Lake, the biggest freshwater lakes in the midstream plain of the Yangtze River. The reserve was established in 1997 with a total area of 168 000 ha. The reserve lies across Yuanjiang City and Ziyang Region. Lots of ponds and rivers, warm weather, abundant rainfall and rich biodiversity are represented in the site. According to investigations, there are 23 beast species under 13 families, 164 bird species (belonging to 43 families of 16 orders), 29 reptiles species under 8 families, 11 fish species under 23 families, 8 amphibians species under 3 families, 863 plant species (under 475 genera of 154 families) live here, including 6 national first-class protected bird species, such as white crane, hooded crane, white stork, black stork, great bustard and scaly-sided merganser. The rich natural resources compose a special ecosystem in the Nan Dongting Lake Nature Reserve. At the same time, it is an important migrating route way of Northeast Asia. In addition, this site plays an important role in flood regulation the Yangtze River as well as regional economic development.

**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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7	8	9
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**14. Justification for the application of each Criterion listed in 13 above:**

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

**Criterion 2:** There are 16 species in the IUCN Red List, including 1 critically endangered species, 6 endangered species, and 9 vulnerable bird species.

Species Latin Name	IUCN Category
<i>Grus leucogeranus</i>	CR

<i>Anser cygnoides</i>	EN
<i>Tringa guttifer</i>	EN
<i>Ciconia boyciana</i>	EN
<i>Eurynorhynchus pygmeus</i>	EN
<i>Acipenser sinensis</i>	EN
<i>Platalea minor</i>	EN
<i>Grus vipio</i>	VU
<i>Coturnicops exquisitus</i>	VU
<i>Mergus squamatus</i>	VU
<i>Aythya baeri</i>	VU
<i>Grus monacha a baeri</i>	VU
<i>Anas Formosa</i>	VU
<i>Otis tarda</i>	VU
<i>Anser erythropus</i>	VU
<i>Branta ruficollis</i>	VU

**Criterion 3:** The site is an important inland wetland in the subtropical regions. It holds rich biodiversity, particularly a great abundance of waterfowls. According to investigations, 118 species of waterfowls inhabit or winter in this site. The major types of wetland include the artificial wetlands, mudflats, open waters and grass marsh.

**Criterion 5:** This site provides habitats for 118 species of waterfowls, the total individuals of which are 50 000-80 000 (1997-2006). According to the survey in 2006, there are 66800 individuals of 32 waterfowl species.

**Criterion 6:** There were 7 species of waterfowls recorded in 1997-2006 winter waterbird survey, exceeding 1% of the global abundance (the table below).

Scientific name	Abundance	1% Abundance
<i>Phalacrocorax carbo</i>	1800	1000
<i>Anser fabalis</i>	6230	800
<i>Anser albifrons</i>	8430	1800
<i>Anser erythropus</i>	5280	200
<i>Anas falcata</i>	1820	350
<i>Grus grus</i>	90	110
<i>Recurvirostra avosetta</i>	1600	1000

**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 subdivision, 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:** The site is located in the midstream area of the Yangtze River. In the late Mesozoic Era, the Yanshan Mountain movement corrupted, under the alluvial effects of Yangtze River, Xiang River, Zi River, Yuan River and Li River, the geosyncline crust is covered by the remnants of the rivers and the lakes gradually form flat lake basin.

**Origin:** The site includes natural and artificial wetland. The natural wetland is the flat lake basin formed by the alluvial effects of Yangtze River, Xiang River, Zi River, Yuan River, and Li River. The artificial wetland is the farm or ponds formed by reclaimed marshlands.

**Hydrology:** The rainfall is abundant in the site. The mean surface runoff is 973 million m<sup>3</sup>. There is 224.5 billion m<sup>3</sup>-water passing through the site every year. The communities around the wetland need to prevent flood in the flood season. The severe flood frequency is three in 10 years. Water coverage is 89 000 ha (accounting for 65.4% of the site) in the flood seasons while 38 000 ha (accounting for 27.9%) in the dry seasons. The site is the important flood storage lake which could reduce the flood pressure to the mid-downstream areas of Yangtze River, Wuhan City in particular.

**Soils type:** marsh meadow soil and bog soil hold the main.

**Water Quality:** The wetland belongs to water-carrying lake. The quality of water is good, up to the national second-class standard.

**Water depth:** The maximum water depth is 15.6 m in the flood seasons while that is 2 m in the dry seasons.

**Climate:** The Nature Reserve belongs to the subtropical humid climate zone. The annual average temperature is 17.0 °C. The annual average precipitation is 1300-1400mm, with 135-160 rainy days every year. The precipitation distributes unevenly within a year, high in the spring and summer and low in autumn and winter. The annual average accumulated hours of sunshine is 1600 hours.

## 17. Physical features of the catchment area:

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

The area of the catchment is 1,300,000 km<sup>2</sup>, with 1,040,000 km<sup>2</sup> at the upper reach of the main stream of Yangtze River and 260,000 km<sup>2</sup> of Xiang River, Zi River, Yuan River and Li River. The major soil types are moisture soil, bog soil and boggy meadow soil. The usage of the land is mainly agriculture, fishery, forestry, shipping and supplying the residents living. It belongs to moist continental sub-tropical monsoon climate, featuring warm and humidity, plentiful sunlight, abundant wind and rain and specific seasons.

## 18. Hydrological values:

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

South Doongting Lake can store water from Xiang, Zi, Yuan, Li and Yangtze River, degrade toxic substances, deposit silt, stabilizing microclimate, increase the output of aquaculture. The annual average runoff of the wetland is 973 million cubic meters, which is 1148 million m<sup>3</sup> in the high water year, 949 million m<sup>3</sup> in the common year, 770 m<sup>3</sup> in the low water year, 625 m<sup>3</sup> in the especially low water year.

## 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)
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#### Inland:

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

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

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

Range the types of the wetland by area: permanent freshwater lakes; permanent rivers/streams/creeks; permanent freshwater marshes/pools; freshwater, tree-dominated wetlands; seasonally flooded agricultural land; irrigated land; ponds, aquaculture (no detailed data)

## 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.

South Dongting Lake is an important freshwater stream and lake compound wetland ecosystem in China, even all over the world. The wetland enjoys a high reputation in the world and serves as one of the 200 important global ecological sites (by WWF), which also provides habitats and winter inhabiting place for a great number of rare or endangered species. It is one of the biggest wintering grounds for migratory birds in China and even in Asia. It was inscribed in the second list of the world's important wetlands, playing an important role in adjusting runoff about Yangtze River and other four rivers, preventing flood and reducing disaster. The wetland contribute a lot in diverting Xiajing River flood, reducing the water dropped into a lake at flood peaks, and lightening flood threaten in the lower reaches of Yangtze River. It can divide 30% water flow of Xiajing River and reduce 30%-40% water flow dropped into the lake. Therefore, South Dongting Lake makes vital contributions in ecological security guarantee, which is the lifeline of Hunan province. The wetland is a major producer of four family fisht in China, such as

herring, grass carp chub and *Aristichthys nobilis*, and main habitat for Chinese sturgeon, paddlefish, cowfish and Chinese river dolphin.

### **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.***

The biological output of the wetland is high. There are a lot of high-valued vegetation species, such as ramie, reed, cotton, rice, wormwood, lotus and *Zizania aquatica*. The wetland is an important producing region of ramie, reeds, cotton and rice in China. The wormwood is a kind of natural green food which is very popular in mass. The lotus and *Zizania aquatica* are emerged plants, playing important roles in avoiding disasters in agriculture. According to preliminary statistics, there are 863 plant species, under 475 genus 154 families.

### **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.***

There are 160 species of birds (under 42 families 16 order), 114 species of fishes (under 23 families 12 order), and 29 species under 8 families of reptiles recorded in the wetlands. There are 8 species listed in the first level National Protected Animals, including white crane, hooded crane, white stork, black stork, great bustard, scaly-sided merganser, Chinese sturgeon and paddlefish. There are 35 species listed in the second level National Protected Animals. The density of the waterfowl living through the winter is high.

### **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 reserve is located in hinterland of rich Dongting Lake, which yields in rice, cotton, ramie, rapeseed, orange, reed, poultry, livestock and fish. The area of grain is 23882 ha with an annual yield of 239 thousand ton, equalling to 142 million RMB. The area of cotton is 2780 ha with an annual yield of 44.2 million ton, equalling 34.48 million RMB. The area of reed is 13334 ha with an annual yield 120431 ton, equalling 25.49 million RMB. The area of forest is 4667 ha with the growing stock of 245 thousand m<sup>3</sup>. The ratio of forest cover is 17.6% with the annual production value equalling to 92.3 million RMB. The situation of no tree that supplies for bird resting and affords ample shade has been changed completely. It becomes a green pearl. The annual fish products reach up to 28885 ton, equalling to 159.83 million RMB. The annual output of livestock

is 233.4 thousand equalling to 98.72 million RMB.

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

Yes.

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

i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:

ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:

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:

The social and cultural value of the wetland: South Dongting Lake is the cradle of rice cultivation culture in the world and the most ancient birthplace of agriculture. It has a long history of wetland boat culture for 10 000 years, and dragon boat cultural for nearly 3000 years, because of which, it is regarded as the hometown of Chinese traditional festival Duanwu.

#### **24. Land tenure/ownership:**

a) within the Ramsar site:

The land within the Ramsar site has a land tenure of State-owned., while the utilization right belongs to local government and the reserve.

b) in the surrounding area:

The land within the Ramsar site has a land tenure of State-owned., while the utilization right belongs to local government.

#### **25. Current land (including water) use:**

a) Within the Ramsar site:

There are 14 thousand fishermen and farmers in the wetland. Their main activities are fishing and raising in the catchment, planting economic crops in the beach and field. The reed areas on the wetland beach is 1.3 ha, yielding 120000 ton every year. They plant rice, cotton, ramie, *Zizania aquatica* and lotus root on dyke. The total area of the land owned by collectives is 48308 ha, including 30918 ha infield (64.4%), 3467 ha forest (7.2%), 13300 ha reed area (26.9%) and 623 other kinds of landuse (1.5%).



b) in the surroundings/catchment:

The surrounding land is principally used for agricultural production including rice, ramie, orange, sugarcane and other economic crops cultivating. The wetland is a large important national base of grain, cotton, oil, pigs, fishes and poultry production.

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

a) Within the Ramsar site:

The hydrological conditions are being modified gradually by the silt deposition, which could produce some influences on the wetland.

b) in the surrounding area:

The agriculture and fishing activities in the surrounding areas could produce some influences on the wetland.

**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.

County-level Nature Reserve was founded in 1991, and South Dongting Lake Provincial Nature Reserve was established in July, 1997. From 1997 on, the national forestry bureau gave approval to the wetlands ecological monitoring project, the wetlands repair and preservation projects, the wetland protection construction project, etc. They has invested 7,620,000 RMB, with 3,000,000 RMB allotted by the local government into the fundamental construction and monitoring equipment of the Nature Reserve. The 2002-2010 South Dongting Lake Nature Reserve Wetlands and Waterfowl Protection Management Plan has been drawn up.

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?:

In order to recover the degenerative wetland ecosystem and to preserve South Dongting Lake's biodiversity, South Dongting Lake Wetlands Recovery Project has been approved with a duration from 2005 to 2007. The principle purpose of this project is to strengthen the protection of diverse habitats for different kinds of rare or endangered waterfowls, and to improve the quality of their winter inhabiting place and to promote the sustainable use of wetland biodiversity.

d) Describe any other current management practices:

The Provincial Nature Reserve was founded in 1997 with an area of 168000 ha. The reserve has drawn the comprehensive plan, management plan, ecotourism plan and has compiled the ecological monitoring sites plan. Management staffs patrol in winter for winter migratory birds. They have established propaganda boards, printed booklets and often promote activities to enhance the public awareness of the wetland and waterfowl protecting. The project of plant recovery has been carried out in the upper reaches area. The projects of returning farmland to the lake, protecting and restoring the wetland, as well as the Global Environment Facility Project, are under work in the wetland.

**28. Conservation measures proposed but not yet implemented:**

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

- a) Plan to build the reserve information monitoring network
- b) Plan to promote experience exchange and technology cooperation program with other wetland nature reserves
- c) Plan to promote related eco-tourism and community co-management

**29. Current scientific research and facilities:**

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

- a). The project of South Dongting Lake wetland protection and restoration has been carried out.
- b). GEF project and related capability construction project are under work.
- c). Promote alternative project for living
- d). Research on life habit, domestication and breeding of gray pie magpie
- e). Scientific research related equipments and some facilities including transport, telescopes, digital camera, etc.

**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.

The Nature Reserve has set permanent propaganda boards, printed introduction booklets and built a simple propaganda and education center. It took the chance of relative activities, such as the "Bird-protection week", to enhance the public awareness of bird protection. Via media, the reserve publicize the importance of wetlands.

**31. Current recreation and tourism:**

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

A vacation village has been built which could accept 30000 tourists each year.

**32. Jurisdiction:**

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

Territorial Jurisdiction: Yiyang City(Yuanjiang town and Ziyang region) government

Functional/sectoral Jurisdiction: Forestry Bureau of Yiyang

Superior management department: Forestry Department of Hunan Province

### **33. Management authority:**

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

Institution: Yiyang South Dongting Lake Nature Reserve Administration Bureau

Address: 165# North Kanfu Road, Yiyang, Hunan Province

Principal: Dai Meibin

Tel: 86-737-4213392

### **34. Bibliographical references:**

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

- [1] Design Department of Zhongnan Forestry Investigation Planning. 1997. South Dongting Lake Marshland and Water-fowl Nature Reserve Comprehensive Planning.
- [2] Design Department of Zhongnan Forestry Investigation Planning. 2002. South Dongting Lake Marshland and Water-fowl Nature Reserve Management Plan in 2002-2010.
- [3] Zhang RZ. 1999. The Biogeography of Fauna in China. Beijing: Science Press.
- [4] Liao FC, He W, Huang XR, Jin QL, He XC. 2002. Studies on present situation and change trend of Dongting Lake fishery resources and environment. *Acta Hydrobiologica Sinica*. 26 (6): 623-627.
- [5] Deng XJ. 2002. The investigation report of winter bird in South Dongting Lake.
- [6] Yu XL. 2002. The investigation report of wetland vegetation in South Dongting Lake.
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- [8] Mark Barter, Lei G, Cao L. 2004. 2003-2004 Waterfowl Survey Report in the Middle and Lower Reaches of Yangtze River. Beijing: Forestry Science Press.
- [9] Fang JY, Zhao SQ, Tang ZY, et al. 2006. Ecological Basis of Regional Biodiversity Conservation of Wetlands in the Central Yangtze. Beijing: Higher Education Press.