

# Information Sheet on Ramsar Wetlands (RIS) – 2009-2014 version

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*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9<sup>th</sup> 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 17, 4th edition).
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.

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Designation date

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Site Reference Number

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### 2. Date this sheet was completed/updated:

June 15, 2013

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### 3. Country:

The People's Republic of China

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### 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.

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### 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
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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:

The total amount of birds remains from 100 thousand to 150 thousand, but the amount of some species varied a lot. As one of the lakes connecting the Yangtze River, Dongting Lake has obvious wet season and drought period, with about 10m head of water between summer and winter. Because the water-break of Dongting Lake shifted to an earlier date, drought period of winter has lower water level and turns to be longer, followed by later freshet. All these cause the wetland area to decrease in winter and the succession from wetland vegetation to terrestrial vegetation. The seasonal variation of wetland area is turning to be larger. The application of the Criteria remains unchanged.

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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 wetland is within the nature reserve, from the main waterway dividing line of Yangtze River in the north to the Leishi Hill of Qu Yuan SAR in the south, holding a common boundary with Nan County in the west.

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**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: 29°19'49"N 112°59'0"E

Extent 29°0'2"-29°37'42"N, 112°43'2"-113°14'55"

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**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.

Hunan East Dongting National Nature Reserve lies in the east part of Dongting Lake, which is located in Yueyang City, northeast Hunan. The east boundary of the Reserve is adjacent with the downtown of Yueyang City, the south boundary of the reserve is 110km away (by roads) from Changsha city. Yueyang city holds a population of 547.79 million (2010).

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

Maximum elevation: 35m

Minimum elevation: 18m

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

190,000 ha

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**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

East Dongting Lake Wetlands, which is now the largest and best-preserved natural seasonal lake in the Dongting Lake area, located in the middle and lower reaches of Yangtze River, accepts the water from Yangtze, Xiang, Zi, Yuan and Li River. The wetlands appear as a single surface of water in summer but can be divided into five kinds of landscapes in winter: water surface, reed marsh, *Carex* marsh, peat marsh and mudflats. The ecological environment of the wetlands is well-preserved. The main plants are aquatic plants such as reeds, *Carex sp.*, *Triarrhena sacchariflora*, and *Potamogeton octandrus*. The wetlands are an important stopover site and wintering grounds for migratory birds, also the main output site of the four most common cultivated fishes in China and the site of the genetic resources center of freshwater fishes. 338 species of birds could be observed in the Reserve, including 127 species of water birds with a total number of more than 100,000. Of all the birds, 52 species are listed as national protected

birds in China, 129 species are listed in the Bird Protection Agreement between China and Japan or Bird Protection Agreement between China and Australia, and 16 species as threatened waterbirds on the IUCN Red List. There are 114 species of fishes in the reserve. Among 1186 species of plants recorded in the reserve, 468 species are aquatic plants. The wetlands are also the main habitat for the river dolphins of the Yangtze valley. East Dongting Lake Wetlands is one of WWF Global 200 biodiversity hotspots PA0415, Southern Asia, China)

### 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:

As an important water regulating lake in the middle and lower reaches of Yangtze River East Dongting Lake Wetlands receive the water from Yangtze, Xiang, Zi, Yuan and Li River of Hunan province. The wetland is the biggest seasonal lake basin of Dongting Lake area, and functions importantly in water quantity regulation of Yangtze River. The wetland plays an important role in flood control, maintenance of high level of water quality, regulation and stabilization of regional climate, and fundamentally promises the sustainable development of local economy.

#### Criterion 2:

Species name	English name	IUCN	CMS	CITES	National protection of China
<i>Leucogeranus leucogeranus</i>	Siberian Crane	CR	I & II	I	I
<i>Eurynorhynchus pygmeus</i>	Spoon-billed Sandpiper	CR	I & II	—	—
<i>Acipenser sinensis</i>	Chinese Sturgeon	CR	II	II	I
<i>Tringa guttifer</i>	Nordmann's Greenshank	EN	I & II	I	II
<i>Ciconia boyciana</i>	Oriental Stork	EN	I	I	-
<i>Platalea minor</i>	Black-faced Spoonbill	EN	I	—	II
<i>Mergus squamatus</i>	Chinese Merganser, Scaly-sided Merganser	EN	—	—	I
<i>Aythya baeri</i>	Baer's Pochard	CR	I & II	—	—
<i>Branta ruficollis</i>	Red-breasted Goose	EN	I & II	II	II
<i>Anser cygnoides</i>	Swan Goose	VU	I & II	—	—
<i>Neophocaena phocaenoides</i>	Indo-Pacific Finless Porpoise	VU	II	I	II
<i>Grus vipio</i>	White-naped Crane,	VU	I & II	I I	II
<i>Grus monacha</i>	Hooded Crane	VU	I & II	I	I
<i>Aquila clanga</i>	Spotted eagle	VU	I & II	II	—
<i>Otis tarda</i>	Great Bustard	VU	I & II	II	I

<i>Anser erythropus</i>	Lesser White-fronted Goose	VU	I & II	—	—
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**Criterion 3:**

East Dongting Lake Wetland is part of one of the WWF Global 200 eco-regions ( PA0415, Southern Asia, China) . This area is an important component of the wetlands in the middle and lower reaches of Yangtze River, representative of wetland types of this district, and also critical wintering grounds for waterbirds and major breeding sites for freshwater fishes and aquatics. The wetlands hold a great abundance of animal resources, including 338 species of birds, 114 species of fishes, and 468 species of aquatic plants. East Dongting Lake Wetlands, where the wintering waterbirds have features of rich species, great abundance and high density is the largest wintering field for *Anser erythropus* in the world, whose population there takes up more than 60% of the species' whole abundance. This area is also important breeding sites for migratory fishes, major genetic resources pool of freshwater fishes of China, especially the major production place of the four most common cultivated fishes in China (*Mylopharyngodon piceus*, *Ctenopharyngodon idellus*, *Hypophthalmichthys molitrix*, *Aristichthys mobilis*). Besides, East Dongting Lake Wetlands are main habitats for rare and endangered fishes *Acipenser sinensis* Gray and *Psephurus gladius*, and aquatic mammals *Neophocaena phocaenoides* and *Lipotes vexillifer* as well. In addition, this area is also natural distribution and genetic resources centre of wild soybean.

**Criterion 4:**

East Dongting Lake Wetland is an important migration stopover site and wintering area for *Leucogeranus leucogeranus*, *Ciconia boyciana*, *Anser cygnoides*, *Grus vipio* and other rare waterbirds, as well as an important refuge for endangered animals, such as finless porpoise (*Neophocaena phocaenoides*) and Pere David Deer (*Elaphurus davidianus*). About 100 finless porpoises live in the East Dongting Lake Wetland, which accounts for 10% of all the finless porpoises in the Yangtze River catchment, according to the survey conducted by the Institute of Hydrobiology Chinese Academy of Science in Dec, 2012. About 70 wild Pere David Deers were recorded in the East Dongting Lake in 2012, which was extinct in wild before. The Pere David Deer population escaped from Pere David Deer Nature Reserve of Swan Oxbow in Hubei to Dongting Lake area, forming a natural wild population.

**Criterion 5:**

The approximate total number of waterbirds in the wetlands is about 110,000 to 170, 000. During the winter survey of total Dongting Lake catchment from 2009 to 2012, 73 species of waterbirds ( belong to 7 orders and 13 families) were recorded, including 5 species of 1<sup>st</sup> level of national protected birds in China, 5 species of 2<sup>nd</sup> level of national protected birds in China. The annual average number of waterbirds wintering in Dongting Lake is 133,000, varying from 104,223 to 178,213. In the winter survey of East Dongting Lake, 46 species from 88,259 waterbirds were recorded in 2009, 46 species from 109,091 waterbirds were recorded in 2010, 54 species from 150,006 waterbirds were recorded in 2011, and 44 species from 92,933 waterbirds were recorded in 2012c

**Criterion 6:** Among all the waterbirds recorded in the 2009-2012 winter waterbird survey, the species whose abundance exceeded 1% of the global abundance are list in the table below.

Species name	abundance				1% abundance
	2009	2010	2011	2012	
<i>Anser fabalis</i>	10372	17587	33259	8873	30

<i>Anser erythropus</i>	11432	23519	24622	22227	260
<i>Anas falcata</i>	15411	23740	22988	16454	830
<i>Platalea leucorodia</i>	3354	—	—	6933	100

**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:**

Evergreen sclerophyllous forests, scrubso or woodlands, Oriental Deciduous Forest  
Biogeographic Province, Palaearctic Realm.

**b) biogeographic regionalisation scheme** (include reference citation):

A Classification of the Biogeographical Provinces of the World (Miklos D.F. Udvardy, 1975)

**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 Physiognomy:** This wetland is located in the lowland between the anticline of Jiangnan and the syncline of Eqian. In the late Mesozoic Era, the Yanshan Mount movement corrupted and the Xiangjiang fracture zone appeared with the east part of the fractures rising and the west sinking during the Tertiary and the Quaternary Period. It became stable in the recent epoch. Under the striking force 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 to form flat lake basin. The area along the lakes is mainly of deposit sandstone. The Nature Reserve has lower sea level and flat, declines to the south with 3% falling gradient. The whole area is the slightly wavy plain, saucer appearance. On the east of the lake is hilly ground, 40-80m above sea level, with the appearance of cities and towns, in the shadow of the evergreen broad leaf forests. On the west of the lake are the polders, alluvial shape plain, 30-36m above sea level. A total length of 1,068km levee is built on the height of 30m sea level, surrounding the plain. Inside of the levee are farmlands, and outside is the lake basin. The lake basin declines from the southwest to the northeast, 10-30m above sea level. In the plentiful period, the whole lake basin is under water. With the drop of the water level, reed marshes, *Carex lasiocarpa* communities, mudflats, and shoals will be exposed gradually. Because of siltation, watercourses division by the Xiang, Yuan and Zhuzi River, prior reclamation, and water maintaining effect of the levee, the whole lake is separated into several inner lakes of different sizes.

**Climate:** The Nature Reserve belongs to the transition zone from the middle sub-tropical to the north sub-tropical climate. Influenced by the East Asian monsoon and vast water area of the Yangtze River and Dongting Lake, it features the humid continental sub-tropical monsoon climate. It features warm and humid, plentiful sunlight, abundant wind and rain, specific seasons in the Nature Reserve. The annual average temperature is 17.0°C. The annual average accumulated hours of sunshine is 1600 hours. The sunshine rate is 38%. The annual energy of the sunshine radiation accumulates to 418.68 kJ/cm<sup>2</sup>. The Nature Reserve has an average annual precipitation of 1200-1450mm, and 135-160 rainy days every year. It has 8-11 snowy days and the accumulated snowfalls last 5-8 days. The precipitation changes a lot from year to year. It

could be as high as 2336mm (in 1954) and as low as 787mm. The precipitation distributes unevenly within a year. The six months from March to August are rainy period, when the amount of rainfall takes 70% of the annual total; From September to February, it has less precipitation, which only takes 30%. The monthly precipitation changes a lot in different years. The greatest difference of the precipitation of June, July and August could be 821mm, 319mm and 372mm.

**Soil Type:** The soils of this Reserve originate from the stratified sediments from Yangtze River, Xiang River, Zi River, Yuan River and Li River. The bottom layer is mainly composed of sand and gravel. Upper layers are very thick, composed of sand and silt. The content of the organic matter is usually around 2%. The soil is fertile and highly water permeable. Soil of the plain can be divided into two sub-classes: lacustrine moisture soil and fluvial moisture soil, pH 6.8-8.6; Soil of the basin shoals can be divided by height into moisture soil, bog soil, boggy meadow soil and sands, being neutral with a little bit acidic.

**Origin:** Naturally originated.

**Hydrology:** The East Dongting Lake is the main part of Dongting Lake with the largest water area of 1328km<sup>2</sup> and constitutes half of Dongting Lake. It is a passing-by and storage lake taking water from Xiang, Zi, Yuan, Li and Yangtze River, functions importantly in the Yangtze River water quantity control. The high water period is from May to September, the low water period is from December to February. The drop height of the water level is usually 10m-14m in a year. When the flood of Yangtze River and other four rivers meets, the drop height could be as high as 17-18m. In the high water period in summer, the shallow water area is 12400ha, and the deep water area is 53000ha. In the low water period in winter, the shallow water area is 46000ha, and the deep water area is 19400ha. Due to the huge supply of the passing-by water, the subsoil water resource is very abundant. 5m beneath the vast impacted plain, the layer contains plentiful subsoil water. Average emerging water amount could be as high as 300t-3000t/day per well. Large amount of silt deposits here. 142,000,000m<sup>3</sup> silts are input from the passing-by water per year, and 36,000,000m<sup>3</sup> silts output. 106,000,000m<sup>3</sup> silts are deposited in the lake per year.

**Water quality:** the pollution and eutrophication of Dongting Lake is mainly caused by various kinds of spotted original and plane original pollutants pouring into the lake wetland or the rivers. According to the survey of the 100 main industry corporations in 1999, annual emission of industrial waste water is 2.006×108t, among which, COD is 170201.3t, BOD<sub>5</sub> is 37128.1t, suspended substance is 36619.65t, and ammonia nitrogen is 2487t. Total exit nitrogen is 647937.7t/a. Total exit phosphorus is 52398.35t/a. Total detained phosphorus is 107002.75t/a. The detaining rates of the total phosphorus and the total nitrogen are 12.93% and 14.17% (Su 2002). The water of Dongting Lake has high phosphorus and nitrogen level, gaining the potential ability of eutrophication. But due to the specific hydrological and silt conditions, the eutrophication is not conspicuous nowadays.

#### 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> above the main stream of Yangtze River and 260,000 km<sup>2</sup> of Xiang, Zi, Yuan and Li River. 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 humid, 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.

East Dongting Lake is a passing-by and storage lake taking water from Xiang, Zi, Yuan, Li and Yangtze River, functioning importantly in the Yangtze River water quantity control. It has important roles in supplying the subsoil water, preventing flood, holding sediments, degrading toxic substances, reserving nutrients, exporting biomass, stabilizing microclimate and controlling the flood.

### 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.

O (51%), M (3%).

There are temporarily no area data of human-made wetland and non-wetland parts.

### 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.

The water of East Dongting Lake Wetlands comes from East Dongting Lake and other local rivers. The land surface is moist or with water accumulated. Aquatic plants and helophytes distribute as a round belt by the water depth gradients. The wetlands appear as a single surface of water in summer but can be divided into five kinds of landscapes in winter: water surface, reeds marsh, *Carex* marsh, peat marsh and mudflats. The entire ecological environment of the wetlands is well-preserved, providing high quality habitats for birds. The wetlands support a rich and abundant waterbird community, especially a large number of wintering and migratory waterbirds that stop here. The wetlands are important habitats and breeding sites for freshwater fishes and critical habitats for finless porpoise (*Neophocaena phocaenoides*) and David Deer (*Elaphurus davidianus*).

**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 natural vegetations of the Nature Reserve are mainly hygrophytes. From the water to the land, the vegetation type changes in the order of submerged plants, floating plants, emerged plants, *Carex lasiocarpa* meadows, fleabanes, reeds, deciduous broad-leaved forest, and evergreen broad-leaved forest. The main hygrophyte communities are reeds, sweet caneflower silvergrasses, *Carex*, *Potamogeton*, bulrushes, etc. The vegetation has uniform components in the same stratum, but differs in different strata. Reeds, sweet caneflower and silvergrasses are the most valuable economic plants in the Nature Reserve. Reed production is an important agricultural industry in local economy. In addition, *Brasenia schreberi* and wild soybean (*Glycine soja*) also distributes in this area, *Brasenia schreberi* is listed as the 1<sup>st</sup> level of national protected wild plants, and wild soybean is listed as the 2<sup>nd</sup> level of national protected wild plants.

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**22. Noteworthy fauna:**

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., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

The representative animals in the Nature Reserve are hygrophilous or semi-hygrophilous, mainly migratory waterbirds and freshwater fishes. Migratory waterbirds principally include storks, cranes, egrets and ducks. Fishes belong to 23 families 114 species, including more than ten migratory species. Most of the fishes are economic fishes. About 100 finless porpoises were recorded in 2010-2012 surveys, accounted for 10 of the total number in Yangtze Valley.

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**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:

This area is an important base for agriculture, fishery and livestock breeding industry. In 2012, the gross grain yield of this area is  $315.08 \times 10^4$  t,  $7.38 \times 10^4$  t more than last year, increased by 2.4%. Cotton yield  $17.13 \times 10^4$  t, increased by 5.5 % to the last year. Livestock and poultry production is  $58.17 \times 10^4$  t, increased by 4.0% to the last year. Egg production is  $8.06 \times 10^4$  t, increased by 1.7% to the last year. Aquatic production is  $42.26 \times 10^4$  t, increased by 11.0% to the last year. The total agricultural output in the lake region is 39.078 billion RMB, increased by 3.8% to the last year. The output value of agriculture, forestry, livestock farming and fishery is 18.428 billion RMB, 1.164 billion RMB, 13.012 billion RMB, 5.928 billion RMB and 0.543 billion RMB, increased by 3.0%, 2.3%, 3.6%, 6.6% and 11.0% to the last year, respectively.

East Dongting Lake wetlands border on Yueyang City, a famous city of great historical and cultural interest with more than 2500 years' history. Yueyang City is always the capital of states and counties since 1500 years before. It is the center of politics, economy and culture of north Hunan province. The vast East Dongting Lake and the expansive plain around are the breeding ground for the local culture.

**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:

In the wetland, there are many famous historical sites, such as Yueyang Tower with more than 1700 years' history and Junshan Island with rice fossil and fishery remains of the Neolithic Age, Miluo River where the Chinese culture of Longzhou and Duanwu originated, and the exile field of Qu Yuan, a poet of Chu more than 2000 years ago.

- 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:

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**24. Land tenure/ownership:**

a) within the Ramsar site:

The land ownership belongs to the country. The Nature Reserve has the right to utilize 1, 573ha and to administrate 65, 400ha of the water area. Besides, the rest 124, 600ha of this region is managed by the Nature Reserve together with the local community.

b) in the surrounding area:

The land ownership belongs to the country. Local government and residents have the right of utilization.

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

a) within the Ramsar site:

Dongting Lake is famous as the hometown of fish and rice. As one of the freshwater fish product area in China, freshwater fish raising and fishing are very important to local economic development. The local economy mainly includes agricultural product, fishing, reed planting and reaping. There are 24,000ha reeds and about 25,000 fishermen. Besides, there are several large or middle-scale piers along the lake, open all year round.

b) in the surroundings/catchment:

The deposition plain to the west of the wetland is principally used for agricultural product including rice and other economic crops planting, aquaculture industry, livestock raising, etc. There are also resident districts and towns in the area surrounding the east of the wetland.

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**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 water level has lowered by 1-2m, which results in shoals dried, wintering fields for the birds decreased, and distribution area of xerophytes expanded.

Over-fishing leads to decrease in fishery resources, fishery catch and species richness of economic fishes.

Water pollution caused by the industrial production of the surrounding area makes an effect on the wetland ecosystem.

Poplar and reed planting results in the features of the wetlands changed, and causes the succession from wetlands to terrestrial environment, the shrink of shoals, and the deterioration of environment.

b) in the surrounding area:

Expressways and wind power stations are constructed.

Planting of dryland crops reduces the area of artificial wetlands.

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**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.

Provincial Nature Reserve was founded in 1982, the East Dongting Lake was listed in Wetlands of International Importance in 1992, East Dongting Lake National Nature Reserve was established in April, 1994. 'Notice for reinforcing the reservation and management of wetland' was released by the government of Hunan Province in 2004. 'Regulations of wetland

conservation of Hunan Province' was implemented in Oct, 2005. 'Decision of reinforce the fishery resources management of Dongting Lake' was promulgated by the People's Congress of Hunan province in 2006. 'Notice for establishing the Dongting Lake wetland conservation committee' was released by the government of Hunan Province. A comprehensive coordinating mechanism committee for conserving the Dongting Lake was established in 2007, with the Vice Governor of Hunan Province acting as the committee director. 'Notice for closed management of Daxihu Lake, Xiaoxihu Lake and entrenchments in the core area of East Dongting Lake Reserve" was released by the government of Yueyang city. "Leader team for comprehensive managing the East Dongting Lake Reserve" was established by the Municipal party committee and Municipal government of Yueyang city, with the vice mayor in charge as the team header.

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?:

The implementing plan of national exemplary reserve ( 2011-2015 ) .

d) Describe any other current management practices:

According to Law of the People's Republic of China on the Protection of Wildlife, China Nature Protection Regulation and Hunan Wetlands Protection Regulation, East Dongting Lake National Nature Reserve brings core and buffer region of the reserve into protection, restricts the exploitation and use of the wetlands, forbids hunting, illegal fishing and projects that have negative influence on the wetlands, reduces the disturbance of human activities, etc. The Nature Reserve also establishes a scientific research monitoring system, takes simultaneous monitoring of the birds every spring, summer and winter, and keeps up waterbirds monitoring in the wintering period, so that it provides valid basis for the management of wetland resources. Community Co-administration Committee has been set up by the Nature Reserve together with the peripheral communities, which carries out co-administration to the wetland resources. The Nature Reserve takes out projects of wetland resources sustainable utilization and trainings of alternative industrial technology, in order to ease the social and economic pressure of wetland resources utilization.

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

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

- a. Closed management in the core area
  - b. Management methods of Dongting Lake
  - c. Comprehensive management of the catchment of Dongting Lake.
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**29. Current scientific research and facilities:**

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

There are now four biodiversity monitoring and management stations in the Nature Reserve. Monitoring platforms, telescopes and other monitoring equipments are used to support a maturer daily monitoring system.

Surveys and investigations of Lesser White-fronted Goose, Oriental White Stork and Siberian Crane have been carried out.

Wintering waterbirds simultaneous survey and special investigation of Dunlins are carried out.

Terrestrial wild animal diseases monitoring station is established, with monitoring funds and equipment.

Dongting Lake biodiversity monitoring plan supported by the GEF project of United Nations Global Environment Facility is under work.

The ecological exemplary project by the State Council for Three Gorges is under work.

The restoration project for the East Dongting Lake wetland is under work.

The biodiversity monitoring project(including *Neophocaena phocaenoides*, *Elaphurus davidianus*, fish, birds, *Microtus fortis* and vegetation) of Dongting Lake by the Chinese Academy of Environmental Science is under work.

Dongting Lake Wetlands local biodiversity recourses survey of 2013 is being designed. Present equipments for scientific research include transport, digital camera, camcorder, fax machine, GPS, telescopes, binoculars, computers, etc.

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### **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.

There 120 specimens of birds, fishes, *Neophocaena phocaenoides*, *Elaphurus davidianus* are exhibited in the Herbarium of the Propaganda and Education Center in the Nature Reserve. The Nature Reserve has printed about 50, 000 copies of propaganda booklets, such as information booklets of itself, Bird Race pamphlets, and bird cards. Picture album named 'Come to Dongting Lake and watch birds in winter' has been printed about 3,000 copies. The Nature Reserve made some topic telefilms, such as 'step into the oriental wetlands', 'Dongting of the world', and 'The migration of *Anser erythropus*' which is the first 4D film of the Natural Reserve. The Natural Reserve set up a website about the Dongting Lake Wetlands ([www. Dongting.org](http://www.Dongting.org)). The Natural Reserve was titled as 'Ecological civilization education base of Hunan Province' and continuously carried out environmental education and training activities with some schools in the past 30 years. Since 2002, Dongting Lake Bird Festival has been held 7 times, 170 teams participated in the race. More than 6000 experts, journalists, and contestants participated, About 1,500 pieces of news was reported by 60 media, and 25 divisions or organizations was engaged in the operation of the festival. About 35,000 publics took part in this festival, thus greatly promoted birdwatching tourism and the public environmental sense.

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### 31. Current recreation and tourism:

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

East Dongting Lake Wetland is a famous tourist district of wetland culture and landscape. About 200,000 tourists visit Junshan Island and about 300,000 tourists visit Yueyang Tower each year. Besides, thousands of people take a tour of birdwatching at Dongting Lake wetland every year.

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### 32. Jurisdiction:

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

Territorial Jurisdiction: Government of Yueyang City

Functional/sectoral Jurisdiction: Forestry Bureau of Yueyang City

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### 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: Hunan East Dongting Lake National Nature Reserve Administration Bureau

Address: Zhaoyangxiang 18#, Lanzhu Road, Huabanqiao, Yueyang, Hunan Province.

Zip: 414000

Principal: Zhao Qihong

Tel: 0086-730-8635328

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### 34. Bibliographical references:

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

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