Ramsar Information Sheet

Published on 6 August 2018

China

Hubei Wang Lake

Designation date	8 January 2018
Site number	2349
Coordinates	29°50'37"N 115°20'E
Area	20 495,00 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

Hubei Wang Lake, a China's national important wetlands, mainly consists of shallow lakes, including Wang Lake, Zhupo Lake, Xiayang Lake, Rong Lake Saiqiao Lake, and Baota Lake, flooded marshes and neighbouring mountainous areas. The Site is an inland wetland and aquatic ecosystem dominated with lake wetland with the total wetland area of 12986.36 ha, accounted for 63.4% of the entire site. In the site, the north and south sides are low hills and hillock while the central part is isthmus-like lake regions, forming a unique complex of wetlands ecosystem, where wetlands and forests develop in succession. Hence, the wetlands ecosystem here is a typical representative in the middle and lower reaches of Yangtze River and biogeographic region. The primeval various biotopes are inhabited by 167 species of birds, including some rare and threatened waterbirds, such as Ciconia boyciana, Ciconia nigra, Grus leucogeranus, Cygnus columbianus, Platalea leucorodia and Pelecanus crispus. Since it is a stopover and wintering ground for 20000 to 50000 wintering birds in East Asia - Australasia migration route and breeding grounds for summer birds, protecting the site is of great importance. Wang Lake and Zhupo Lake, partially linked with the Yangtze River, originate from Fu River, a primary tributary of Yangtze River coming from Mufu Mountain. 80% of inflow from the north-facing slope of Mufu Mountain and Yangxin County is discharged into those lakes. Therefore, the site is an essential part of Yangtze River Basin, and is important region of flood diversion for Yangtze River and Fu River.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Hesong ZHENG
Institution/agency	Administration Bureau of Hubei Huangshi Wang Lake Wetland Nature Reserve
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2.1.2 - Period of collection of data and information used to compile the RIS

From year	2014
To year	2016

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Hubei Wang Lake

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<1 file(s) uploaded>

Former maps	0

Boundaries description

Located in the south bank of middle reach of the Yangtze River and the lower reach of Fu River, the site has the same boundary as Wang Lake Wetland Nature Reserve, east to the Yangtze River, south to Fenglin and Mugang Town of YangXin County, west to Taogang, Xingguo and Integrated management areas of Yangxin County and north to Taogang and Banbishan Management Area.

2.2.2 - General location

a) In which large administrative region does the site lie?	Yangxin County, Huangshi City, Hubei Province
b) What is the nearest town or population centre?	Chengdong New District, Yangxin County

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes ○ No ◉

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes ○ No ◉

2.2.4 - Area of the Site

Official area, in hectares (ha):	20495
Area, in hectares (ha) as calculated from GIS boundaries	20498.47

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Udvardy's Biogeographical Provinces	Evergreen sclerophyllous forests, scrubs or woodlands, Oriental Deciduous Forest Biogeographic Province, Palaearcitc Realm

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided	Wang Lake is the catchment of Fu River, the primary tributary of the Yangtze River, and accepts inflow, rainfall, and surface runoff from upstream and surrounding water systems. Subsequently, the water of the Site is delivered to the Yangtze River through Fu River and channels of Wang Lake. The annual water input from Wang Lake to the Yangtze River is 1.432 billion m3 and annual flood storage volume is 0.164 billion m3. Wang Lake also accepts inflow from the north-facing slope of Mufu Mountain, and area of catchment is 70000 ha. In this case, Wang Lake acts as filter to reduce suspended solids from soil erosion and ultimately purify the inflow water. From October to next April, water level declines and plants grows, providing abundant food for aquatic animals. From May to August, water level rises, providing domestic and industrial water for more than 500 thousand surrounding people at a max volume of 0.46 billion m3. The balance and fluctuation of the temperature and precipitation of Wang Lake lead to better climate for living and farming there. Therefore, Wang Lake is of great importance in hydrographical values, including regulating and restoring flood, supplying extra water for the downstream of the Yangtze River, maintaining the high water quality, stabilizing and regulating the regional climate.
Other ecosystem services provided	Located in the core narrows between the Mufu Mountains and Dabie Mountains of Central China, the middle reaches of the Yangtze river plain and the hilly area in the southeast of Hubei Province., Wang Lake wetlands, partially linked with the Yangtze River, is preserved in near-natural state. The isthmus-like lake regions in the central part of the site, surrounded by low mountains and hills on the north, south, and southeast of the site, is well protected by those thick natural barriers and relatively isolated geographical environment. Lakes, marshes and forests develop in succession in the site, forming rather complex but integrated wetlands ecosystem. Various habitats appears in the site, including open water, washland, meadow, farmland, bushes, shrub, and forest, providing suitable shelters and breeding places for animals and plants. What's more, it is a wintering ground for 20 ~ 50 thousand winter birds in East Asian - Australasian bird migration route. Therefore, the site stands out in East Asia and the biogeographic region of the middle to lower reaches of the Yangtze river plain.

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Justification	Wang Lake, a complex wetland ecosystem dominated by many lakes adding with marshes, rivers, pools and forests, is of great value to the conservation of biodiversity for biogeographic region. Vegetation here is made up by 3 categories, aquatic vegetation, marsh vegetation, and forest vegetation, with 591 of vascular plant species in total. Diversified wetland landscapes provide shelters for many zooplanktons, zoobenthos, fishes, amphibians, reptilians, birds and mammals. In the site, 46 species of zooplanktons, 30 species of zoobenthos, 74 species of fishes, 33 species of amphibians and reptilians, 167 species of birds, and 25 species of mammals are found, including 2 species of plants under Class I National Protection, 3 species of plants under Class II National Protection, 5 species of animals under Class I National Protection, and 33 species of animals under Class II National Protection. In addition, Cinnamomum camphora, a kind of plant in National Protection Class II, is distributed widely in the site and 3 ancient camphor communities have formed. Lamprotula fibrosa Heude, an endemic species of China, distributes in Yangtze River Basin. The total biomass of it in Wang Lake is more than 50000 kg, coming second in the world.

☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions

☑ Criterion 5 : >20,000 waterbirds

Overall waterbird numbers: 28149,27992,49892

Start year: 2014

Source of data: Wuhan University, WWF, Wuhan Birding Association, Investigation report provided by wild animal protection station in Hubei, Daily monitoring results of Wanghu Wetland Nature Reserve.

☑ Criterion 6 : >1% waterbird population

☑ Criterion 7 : Significant and representative fish

Justification: There are 74 fish species found in Wang Lake, among which 90% are local fishes, including Anguilla japonica etc. Every March, migratory fishes, such as Acipenser sinensis and Takifugu obscurus, migrate from the Yangtze River to Fu River, forage and spawn in lakes along the river. Acipenser sinensis, a kind of fish in National Protection Class I, is critically endangered. The site provide habitat for it and has great significance for its living.

☑ Criterion 8 : Fish spawning grounds, etc.

Justification: As an inland wetland and aquatic ecosystem, Wang Lake is an important habitat for many fishes to live, spawn, and forage. Located in the confluence of the Fu River and the Yangtze River, the site is an important migration channel and spawning and foraging base for migratory fishes such as Acipenser sinensis and Takifugu obscurus.

3.2 - Plant species whose presence relates to the international importance of the site

<no data available>

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Birds																		
CHORDATA/ AVES	*Anas falcata*	Falcated Teal; Falcated Duck	☐	☑	☑	☐	☑	☑	☐	☐	2922	2014-2016	3.52	NT	☐	☐		Crit 4: wintering in the site;Crit 6: 1 % threshold for C & E Asia is 830 as of 2012.
CHORDATA/ AVES	*Anas poecilorhyncha*	Indian Spot-billed Duck; Spot-billed Duck	☐	☑	☑	☐	☑	☑	☐	☐	2362	2014-2016	2.36	LC	☐	☐		Crit 4: wintering in the site;Crit 6: 1 % threshold for E to S China is 1000 as of 2012.
CHORDATA/ AVES	*Anser cygnoides*	Swan Goose	☑	☑	☐	☐	☑	☑	☐	☐	415	2014-2016		VU	☐	☐		Crit 4: wintering in the site
CHORDATA/ AVES	*Anser erythropus*	Lesser White-fronted Goose	☑	☑	☐	☐	☑	☑	☐	☐	162	2014-2016		VU	☐	☑		Crit 4: wintering in the site
CHORDATA/ AVES	*Anser fabalis*	Bean Goose	☐	☑	☑	☐	☑	☑	☐	☐	4641	2014-2016	154.7	LC	☐	☐		Crit 4: wintering in the site;Crit 6: 1 % threshold for E China is 30 as of 2012.
CHORDATA/ AVES	*Aythya baeri*	Baer's Pochard	☑	☐	☑	☐	☑	☑	☐	☐	7	2014, 2016	1.3	CR	☐	☑		Crit 6: 1 % threshold for E, SE & S Asia is 5 as of 2012.

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/ AVES	*Centropus bengalensis*	Lesser Coucal	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Protection Class II	Crit 4: breeding in the site
CHORDATA/ AVES	*Charadrius placidus*	Long-billed Plover	☐	☑	☐	☐	☑	☑	☐	☐	6	2014		LC	☐	☐	National Protection Class II	Crit 4: wintering in the site
CHORDATA/ AVES	*Ciconia boyciana*	Oriental Stork; Oriental White Stork	☑	☑	☐	☐	☑	☑	☐	☐	3	2014-2016		EN	☑	☑	National Protection Class I	Crit 4: breeding in the site
CHORDATA/ AVES	*Ciconia nigra*	Black Stork	☐	☑	☑	☐	☑	☑	☐	☐	5	2014-2016	5.33	LC	☐	☐	National Protection Class I	Crit 4: breeding in the site;Crit 6: 1 % threshold for E Asia is 1 as of 2012.
CHORDATA/ AVES	*Cygnus columbianus*	Tundra Swan	☐	☑	☑	☐	☑	☑	☐	☐	2057	2014-2016	2.06	LC	☐	☐	National Protection Class II	Crit 4: wintering in the site;Crit 6: 1 % threshold for E Asia is 1000 as of 2012.
CHORDATA/ AVES	*Falco peregrinus*	Peregrine Falcon	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Protection Class II	Crit 4: breeding in the site
CHORDATA/ AVES	*Falco tinnunculus*	Eurasian Kestrel; Common Kestrel	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Protection Class II	Crit 4: breeding in the site
CHORDATA/ AVES	*Glaucidium brodiei*	Collared Owlet	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Protection Class II	Crit 4: breeding in the site
CHORDATA/ AVES	*Glaucidium cuculoides*	Asian Barred Owlet	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Protection Class II	Crit 4: breeding in the site
CHORDATA/ AVES	*Grus leucogeranus*	Siberian Crane	☑	☐	☐	☐	☑	☑	☐	☐	10	2014-2016		CR	☑	☑	National Protection Class I	
CHORDATA/ AVES	*Ninox scutulata*	Brown Hawk-Owl	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Protection Class II	Crit 4: breeding in the site
CHORDATA/ AVES	*Pelecanus crispus*	Dalmatian Pelican	☐	☐	☑	☐	☑	☑	☐	☐	2	2014	2	NT	☑	☑	National Protection Class II	Crit 6: 1 % threshold for E Asia is 1 as of 2012.
CHORDATA/ AVES	*Phalacrocorax carbo*	Great Cormorant	☐	☑	☑	☐	☑	☑	☐	☐	1213	2014-2016	1.21	LC	☐	☐		Crit 4: wintering in the site;Crit 6: 1 % threshold for E & SE Asia is 1000 as of 2012.
CHORDATA/ AVES	*Platalea leucorodia*	Eurasian Spoonbill	☐	☑	☑	☐	☑	☑	☐	☐	1386	2014-2016	13.86	LC	☐	☐	National Protection Class II	Crit 4: wintering in the site;Crit 6: 1 % threshold for E, SE & S Asia is 100 as of 2012.
CHORDATA/ AVES	*Pucrasia macrolopha*	Koklass Pheasant	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	National Protection Class II	Crit 4: breeding in the site
CHORDATA/ AVES	*Recurvirostra avosetta*	Pied Avocet	☐	☑	☑	☐	☑	☑	☐	☐	1495	2014-2016	1.5	LC	☐	☐		Crit 4: wintering in the site;Crit 6: 1 % threshold for E Asia is 1000 as of 2012.
Fish, Mollusc and Crustacea																		
CHORDATA/ ACTINOPTERYGII	*Acipenser sinensis*	Chinese sturgeon; Chinese sturgeon; Chinese sturgeon; Chinese sturgeon	☑	☐	☐	☐	☑	☐	☑	☑				CR	☐	☐	National Protection Class I	Crit 7/8: spawning and feeding grounds
CHORDATA/ ACTINOPTERYGII	*Anguilla japonica*	Japanese eel; Japanese eel; Japanese eel	☑	☐	☐	☐	☑	☐	☑	☑				EN	☐	☐		Crit 7/8: spawning and feeding grounds
Others																		

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA / MAMMALIA	*Capricornis sumatraensis*	serow	☑	☑	☐	☐	☑	☐	☐	☐				VU	☑	☐	National Protection Class II	Crit 4: shelter in the site
CHORDATA / MAMMALIA	*Manis pentadactyla*	Chinese Pangolin	☑	☑	☐	☐	☑	☐	☐	☐				CR	☐	☐	National Protection Class II	Crit 4: shelter in the site
CHORDATA / MAMMALIA	*Moschus berezovskii*	Chinese forest musk deer	☑	☑	☐	☐	☑	☐	☐	☐				EN	☐	☐	National Protection Class I	Crit 4: shelter in the site

1) Percentage of the total biogeographic population at the site

3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

Hubei Wang Lake, consisting of inland shallow lakes and permanent rivers, is a lake-dominated complex wetlands ecosystem where wetlands and forests develop in succession. It is also the important stopover and wintering grounds in the East Asian - Australasian migration route.
In the site, the distribution of wetland vegetation has obvious ecological zone. Submerged vegetation gradually transforms to floating, emergent, and hygrophilous vegetation from the middle to the bank of lakes. Floating vegetation spreads more widely and the submerged vegetation accounts for the majority of the living things in water. Water level is high in summer and autumn, and aquatic vegetation such as Trapa bicornis, Nelumbo nucifera, Vallisneria natans, and Phragmites australis, provides good habitat, breeding and foraging places for rare and endangered summer birds, such as Ciconia boyciana. Water level becomes low in winter and spring, pieces of tidal flat show, and aquatic plants like Carex doniana grow. During this period, fishes and benthonic animals become more easily being preyed due to lower water level, which provides foods for winter birds, such as Platalea leucorodia, Anser cygnoides and Cygnus columbianus. In the near-natural forest which surrounds wetlands, various landscape appears, including open water, washland, meadow, farmland, bushes, shrub, and forest, providing suitable shelters for wildlife, spawning and fattening base for migration fishes like Acipenser sinensis, and habitat for mammals, such as Manis pentadactyla, Lutra lutra, Moschus berezovskii and Capricornis sumatraensis.
Lakes in the site is partially connected with the Yangtze River, and controlled by control sluices linked with Yangtze River. Normally, the sluices are open and hydrological conditions of the site are influenced by the Yangtze River. In flood seasons, the gates are closed aiming flood diversion, irrigation, and water impounding. Migration fishes run into the lakes and inner river network in normal times, and run back into Yangtze River and sea when water falls back. The volume of fresh water stored in the site annually is up to 468 million m3, and the amount of water purified annually is more than 4.756 million tons. Therefore, Wang Lake is of great importance in detoxification, disaster reduction, science education and eco-tourism.

4.2 - What wetland type(s) are in the site?

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> M: Permanent rivers/ streams/ creeks		4	1009.75	Representative
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		1	7991.57	Representative
Fresh water > Marshes on inorganic soils >> Tp: Permanent freshwater marshes/ pools		0	207.09	
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		0	124.69	

Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
1: Aquaculture ponds		2	2384.29	
2: Ponds		0	107.13	
3: Irrigated land		3	1094.83	
9: Canals and drainage channels or ditches		0	24.6	

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Forests	5518.35
non-irrigated farmland	1340.72
Others	649.57

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Glycine max		National Protection Class II
Nelumbo nucifera	sacred lotus	National Protection Class II

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/AVES	*Accipiter nisus*	Eurasian Sparrowhawk				National Protection Class II
CHORDATA/AVES	*Accipiter trivirgatus*	Crested Goshawk				National Protection Class II
CHORDATA/AVES	*Accipiter virgatus*	Besra				National Protection Class II
CHORDATA/AVES	*Aix galericulata*	Mandarin Duck				National Protection Class II
CHORDATA/AVES	*Anser albifrons*	Greater White-fronted Goose	132	2014-2016		National Protection Class II
CHORDATA/AVES	*Asio flammeus*	Short-eared Owl				National Protection Class II
CHORDATA/AVES	*Asio otus*	Long-eared Owl				National Protection Class II
CHORDATA/AVES	*Aviceda leuphotes*	Black Baza				National Protection Class II
CHORDATA/AVES	*Buteo buteo*	Common Buzzard				National Protection Class II
CHORDATA/AVES	*Buteo hemilasius*	Upland Buzzard				National Protection Class II
CHORDATA/AVES	*Chrysolophus pictus*	Golden Pheasant				National Protection Class II
CHORDATA/AVES	*Circus aeruginosus*	Western Marsh Harrier				National Protection Class II
CHORDATA/AVES	*Circus cyaneus*	Northern Harrier				National Protection Class II
CHORDATA/AVES	*Falco columbarius*	Merlin				National Protection Class II
CHORDATA/AVES	*Grus grus*	Common Crane	6	2014, 2016		National Protection Class II
CHORDATA/AVES	*Lophura nycthemera*	Silver Pheasant				National Protection Class II
CHORDATA/MAMMALIA	*Lutra lutra*	European Otter				National Protection Class II
CHORDATA/AVES	*Milvus migrans*	Black Kite				National Protection Class II
CHORDATA/AVES	*Otus scops*	Eurasian Scops Owl				National Protection Class II
CHORDATA/AVES	*Tyto capensis longimembris*					National Protection Class II

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Cfa: Humid subtropical (Mid with no dry season, hot summer)

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 7

a) Maximum elevation above sea level (in metres): 440

- Entire river basin ☐
- Upper part of river basin ☐
- Middle part of river basin ☐
- Lower part of river basin ☑
- More than one river basin ☐
- Not in river basin ☐
- Coastal ☐

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

The site locates in the lower reach of the Yangtze River Basin.

4.4.3 - Soil

- Mineral ☐
- Organic ☑
- No available information ☐

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes ○ No ◉

Please provide further information on the soil (optional)

Four types of soil are found in the site; they are red soil, purple soil, tidal soil and paddy soil.

4.4.4 - Water regime

Water permanence

Presence?
Usually permanent water present

Source of water that maintains character of the site

Presence?	Predominant water source
Water inputs from rainfall	☑
Water inputs from surface water	☑

Water destination

Presence?
Feeds groundwater
To downstream catchment

Stability of water regime

Presence?
Water levels largely stable

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology:

There are over 20 major lakes in the site, including Wang Lake, Zhupo Lake, Xiayang Lake, Saiqiao Lake, and Jiajie Lake, all of which belong to Fu River System. Wang Lake, area of which is 39.11 km2, is one of the core area of the reserve. Water level of the lake, ranging from 13.2 m to 22.5 m, is controlled by a sluice. Average water level and water depth are 15.5 m and 3.5 m, respectively. Wet season starts in June and ends in August, and dry season is November to nest March.
Major rivers in the site include Fu River, Changleyuan River, Longkouyuan River, and Lengshuiyuan River. Fu River, which is 196 km long, goes through the site and flows into the Yangtze River. Changleyuan River is 38.2 km long with 293.3 km2 of catchment. The river flows across the Liangjie River and Nan Lake, and finally flows into Wang Lake.

4.4.5 - Sediment regime

- Significant erosion of sediments occurs on the site ☐
- Significant accretion or deposition of sediments occurs on the site ☑
- Significant transportation of sediments occurs on or through the site ☐
- Sediment regime is highly variable, either seasonally or inter-annually ☐
- Sediment regime unknown ☐

4.4.6 - Water pH

- Acid (pH<5.5) ☐
- Circumneutral (pH: 5.5-7.4) ☐
- Alkaline (pH>7.4) ☑
- Unknown ☐

Please provide further information on pH (optional):

The monitoring records of the past 10 years show that pH ranged from 7.2 to 9.9 (mean 8.3) and peaked in autumn.

4.4.7 - Water salinity

- Fresh (<0.5 g/l) ☑
- Mixohaline (brackish)/Mixosaline (0.5-30 g/l) ☐
- Euhaline/Eusaline (30-40 g/l) ☐
- Hyperhaline/Hypersaline (>40 g/l) ☐
- Unknown ☐

4.4.8 - Dissolved or suspended nutrients in water

- Eutrophic ☐
- Mesotrophic ☑
- Oligotrophic ☐
- Dystrophic ☐
- Unknown ☐

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ○ ii) significantly different ◉

- Surrounding area has greater urbanisation or development ☐
- Surrounding area has higher human population density ☐
- Surrounding area has more intensive agricultural use ☐

Surrounding area has significantly different land cover or habitat types ☐

Please describe other ways in which the surrounding area is different:

Surrounding area has significantly different land cover, compared with the site. South and north side are rolling hills; west side are towns and farmland; east side are the south bank of the Yangtze River, where are towns and farmland, as well.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Low
Fresh water	Drinking water for humans and/or livestock	Medium
Fresh water	Water for irrigated agriculture	Medium
Fresh water	Water for industry	Low
Wetland non-food products	Timber	Low
Wetland non-food products	Livestock fodder	Low

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Medium
Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	Medium
Erosion protection	Soil, sediment and nutrient retention	High
Pollution control and detoxification	Water purification/waste treatment or dilution	High
Climate regulation	Local climate regulation/buffering of change	High
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climactic processes	Medium
Biological control of pests and disease	Support of predators of agricultural pests (e.g., birds feeding on locusts)	Medium
Hazard reduction	Flood control, flood storage	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	Low
Spiritual and inspirational	Inspiration	Medium
Spiritual and inspirational	Aesthetic and sense of place values	Medium
Scientific and educational	Educational activities and opportunities	High
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Medium
Scientific and educational	Long-term monitoring site	High
Scientific and educational	Major scientific study site	Medium

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Sediment retention	High
Soil formation	Accumulation of organic matter	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	High
Nutrient cycling	Carbon storage/sequestration	Medium

Within the site: 8000

Outside the site: 500000

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ◉ No ○ Unknown ○

Where economic studies or assessments of economic valuation have been undertaken at the site, it would be helpful to provide information on where the results of such studies may be located (e.g. website links, citation of published literature):

In September ~ November 2016, the Institute of Remote Sensing and Digital Earth under the Chinese Academy of Sciences assess the wetlands ecosystems for Wang Lake. The results showed overall health index is 7.64, ranking good level; overall function index is 7.65, ranking good level; the total value of wetlands ecosystems is 2.103 billion yuan, i.e. 177.4 thousand yuan per hectare. The value of direct use of the wetlands ecosystem is up to 1.592 billion yuan, which is higher than other values.

4.5.2 - Social and cultural values

i) the site provides 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) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland ☐

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples ☐

iv) 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 ☐

<no data available>

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	☑	☑

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Cooperative/collective (e.g., farmers cooperative)	☑	☑

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: Administration Bureau of Huangshi Wang Lake Wetland Natural Reserve

Provide the name and title of the person or people with responsibility for the wetland: Dan MING

Postal address:
Chenjiawan, Xintang Group
Chengdong New District
Yangxin County
Huangshi City
Hubei Province
P.R. China

E-mail address: hbwhsd001@163.com

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Drainage	Low impact	Low impact	☑	☑
Dredging	Low impact	Low impact	☑	☐
Water releases	Low impact	Low impact	☑	☑

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Annual and perennial non-timber crops	Low impact	Low impact	☑	☐
Marine and freshwater aquaculture	Low impact	Low impact	☑	☑

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads	Low impact	Low impact	☑	☑

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fishing and harvesting aquatic resources	Low impact	Low impact	☑	☑

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact	Low impact	☑	☐

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Dams and water management/use	Low impact	Low impact	☑	☐

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Household sewage, urban waste water	Low impact	Low impact	☑	☑

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Storms and flooding	Medium impact	Medium impact	☑	☑

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Important Wetland	Wang Lake Wetland		whole

5.2.3 - IUCN protected areas categories (2008)

Ia Strict Nature Reserve ☐

Ib Wilderness Area: protected area managed mainly for wilderness protection ☑

II National Park: protected area managed mainly for ecosystem protection and recreation ☐

III Natural Monument: protected area managed mainly for conservation of specific natural features ☐

IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention ☐

V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☐

VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems ☐

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Catchment management initiatives/controls	Partially implemented
Improvement of water quality	Partially implemented
Habitat manipulation/enhancement	Partially implemented
Hydrology management/restoration	Partially implemented
Re-vegetation	Partially implemented
Soil management	Partially implemented
Land conversion controls	Partially implemented
Faunal corridors/passage	Partially implemented

Species

Measures	Status
Threatened/rare species management programmes	Partially implemented
Reintroductions	Partially implemented
Control of invasive alien plants	Partially implemented
Control of invasive alien animals	Implemented

Human Activities

Measures	Status
Management of water abstraction/takes	Partially implemented
Regulation/management of wastes	Partially implemented
Livestock management/exclusion (excluding fisheries)	Partially implemented
Fisheries management/regulation	Implemented
Harvest controls/poaching enforcement	Implemented
Regulation/management of recreational activities	Partially implemented
Communication, education, and participation and awareness activities	Implemented
Research	Implemented

Other:

1) Implement ecological recuperation. For the lakes in core and buffer areas and key lakes for protection, implement ecological recuperation, and reduce the human interferences to zero. For other lakes, implement ecological aquaculture, and forbid the use of formulated diet.
2) Plan and prepare to establish nature reserve, so as to enhance the ability and level of management.
3) Develop alternative industries. Develop alternative industries such as eco-tourism and cultural industry in the experimental area of the reserve, so as to afford livelihood of the communities.
4) Promote management with community participation. Appoint and employ coordinators, volunteers, messengers from communities, encourage residents to participate directly into the wetland protection and management, and offer reasonable ecological compensation to them.

5.2.5 - Management planning

Is there a site-specific management plan for the site? In preparation

Has a management effectiveness assessment been undertaken for the site? Yes ○ No ◉

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes ○ No ◉

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

Wanghu Wetland Nature Reserve is listed as wetland project of GEF lasted 5 years from 2014 to 2018 by Global Environment Facility. GEF provides great support in protection management, technical and equipment help, and science education. The site is also attended by World Wide Fund for Nature (WWF), which provides help in monitoring water birds and hydrologic management. The visit of international organizations has greatly enhanced the protection and management abilities of Wang Lake.

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, but a plan is being prepared

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water regime monitoring	Implemented
Water quality	Implemented
Soil quality	Implemented
Plant community	Implemented
Plant species	Implemented
Animal community	Implemented
Animal species (please specify)	Implemented
Birds	Implemented

Apart from the monitoring mentioned above, the site also monitors the ecological environment and epidemic diseases of wildlife in particular and makes monitoring plan of wetland habitat (including area and landscape), meteorological elements, hydrological and water quality, wetland soil, wild plants and communities, wild animals, invasive species and influencing factors. Birds, especially waterbirds, are monitored with great concern, including threatened wild animals or wildlife under National Protection Class, such as Ciconia boyciana, Ciconia nigra, Leucogeranus leucogeranus, Cygnus columbianus, Platalea leucorodia, and Aythya baeri.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Compiling Committee of Water Resource Annals of Yangxin County. 2009. Water Resource Annals of Yangxin County 1986-2005.
Dai Xi. 2012. Ecological Quality Evaluation of Hubei Wanghu Nature Reserve. Environmental science and management, 37(9):177-180.
Ge Jiwen, Wang Xugu. 2014. Nature Reserves of Huei. Hubei Science and Technology Press.
Gong Shiyuan, Zhu Ziyi, Zhang Xunpu, et al. 1997. Morphology Research of shells of Lamprotula fibrosa in Wanghu Water Area. Acta Hydrobiologica Sinica,21(4):341-345.
Hubei Academy of Environmental Science. 2013. Basin Ecological Environmental Protection Planning of Wanghu.
Hubei Wetland Conservation Fund. 2013. Approaching Wanghu.
Hubei Wildlife Conservation Station, et al. 2005. Biodiversity of Wanghu– the Scientific Investigation Report of Wanghu Natural Reserve.
Hubei Wildlife Conservation Station, et al. 2012. Master Plan of Hubei Wanghu Wetland Nature Reserve (2012-2021).
Hubei Wildlife Conservation Station, et al. 2012. Domenstration Report of Adjusting Function Zone of Hubei Wanghu Wetland Provincial Nature Reserve.
Hubei Wildlife Conservation Station, etc. 2010. Investigation and Evaluation Report of the Resource and Environment of Hubei Wanghu Wetland.
Hu Hongxing, et al. Monitoring Records of Wintering Waterfowls in Wanghu. 2004-2013.
State Forestry Administration, et al. 2000. China National Wetland Conservation Action Plan. China Forestry Publishing House.
The Second Wetland Resources Survey of Yangxin County. 2011.
Wang Yingming. 2002. Vegetation Regionalization of Hubei. Journal of Wuhan Botanical Research, 3(2): 166-174.
Wuhan Bird-watching Society. Monitoring Records of Wintering Waterfowls in Wanghu. 2009-2014.
Wu Shaobin, Wu Faqing, Zha Yuping, et al. 2006. Preliminary Research of Birds in Wanghu Wetland Nature Reserve. Journal of Central China Normal University, 40(3):424-432.
WWF Wuhan Office. Special Survey Report of Baer's Pochard Aythya baeri. 2012-2014.
Xie Y, Li D, MacKinnon J. 2002. Preliminary researches on bio-geographical divisions of China, Acta Ecologica Sinica, 22(10): 1599-1615.
Zhang Rongzu. 1999. Zoogeography of China. Science Press, Beijing.
Zhang Shuai, Cai Zhaohui, Xu Zhiming. 2010. Analysis of Spermatophyte Flora in Wanghu Wetland Nature Reserve. Journal of Xianning University, 30(12):74-75.
Zhu Zhaoquan, Pu Yunhai. 2007. Forestry Nature Reserves of Hubei. Hubei Science and Technology Press.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<3 file(s) uploaded>

ii. a detailed Ecological Character Description (ECD) (in a national format)
<no file available>

iii. a description of the site in a national or regional wetland inventory
<no file available>

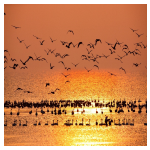
iv. relevant Article 3.2 reports
<no file available>

v. site management plan
<no file available>

vi. other published literature
<no file available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



The evening scene of Wanghu (*Jun Wu , 12-02-2013*)

Fuhe River eocosystem (*Daojin Liu , 05-11-2014*)

Summer scenery of Wanghu (*Yuexin Yan , 24-06-2016*)

Habitat of Wuzhuazui (*Hesong Zheng , 10-12-2016*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation: 2018-01-08