

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 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 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

2. Date this sheet was completed/updated:

May 10, 2012

3. Country:

The People's Republic of China

4. Name of the Ramsar site:

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

Jilin Momoge National 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:

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.

Momoge Wetland has the same boundary as the Momoge National Nature Reserve. The wetland is situated with Nenjiang River to the east, Taoer River to the south, Dandai Township, Wukeshu Township, Hatuqi Township, Dongping and Heiyupao Township to the northwest.

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: 45°54'32"N, 123°45'56"E

Extent: 45°42'33"-46°17'59"N, 123°27'09"-124°4'32"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.

Momoge National Nature Reserve is located in Momoge Township, Zhenlai County, Baicheng City, Jilin Province, in northeast China. It is located approximately 330 km from Changchun City, the capital of Jilin Province, and approximately 79km southwest of Baicheng City. The population of Zhenlai County is about 320,000 and the population of Baicheng City is 2,008,000.

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

Average: 142.0 m

Maximum: 160.7 m

Minimum: 128.0 m.

11. Area: (in hectares)

144,000 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.

Momoge National Nature Reserve is an inland wetland ecosystem mainly composed of lakes and swamps. Located at the transition zone between deserts and grasslands in West Jilin, the Ramsar Site is a typical representative in the area of temperate meadow steppe in the northeastern area of China. The wetland includes rivers, lakes, marshes and swamp meadow. The original state is well preserved. The wetland has abundant water and supports multiple types of plants and the threatened species such as the Siberian Crane (*Leucogeranus leucogeranus*), Hooded Crane (*Grus monacha*), Red-crowned Crane (*Grus japonensis*), and Oriental Stork (*Ciconia boyciana*). The site is an important stopover and breeding site along the East Asian – Australasian Flyway for migratory birds. The number of Siberian Crane detected in spring 2012 was 3809, which accounts for about 97% of the world's population. Within the biogeographic region, Momoge wetland plays a key role in regulating regional climate, biodiversity conservation, especially the protection of rare and endangered bird species, and maintaining ecological balance of the region.

13. Ramsar Criteria:

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9

14. Justification for the application of each Criterion listed in 13 above:

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

Criterion 1:

This Ramsar site is located in the northwestern part of Jilin Province, China, and is adjacent to the western edge of the Songnen Plain. It mainly draws off floodwater from Nenjiang River, Tao River and Erlongtao River, which enriches the capability of flood storage and detention and water purification, to effectively reduce the threat of floods to the Songhua River Watershed downstream. There are more than 80,000 hectares of natural wetlands in Nenjiang River and Taoer River in the Reserve, playing an important role to recharge groundwater, prevent the decline of groundwater level,

regulate regional climate and increase rainfall in this region and neighboring regions. The Ramsar Site is a typical representative in the area of temperate meadow steppe in the northeastern area of China. The wetland includes rivers, lakes, marshes and swamp meadow. The original state is well preserved

Criterion 2:

Threatened species distributed in Momoge wetland are listed as follows.

Species Name	Latin Name	IUCN Category	CMS Appendix	CITES Appendix	National Protection Class
Siberian Crane	<i>Leucogeranus leucogeranus</i>	CR	I/II	I	I
Baer's Pochard	<i>Aythya baeri</i>	CR	I	—	—
Red-crowned Crane	<i>Grus japonensis</i>	EN	I	I	I
Velvet Scoter	<i>Melanitta fusca</i>	EN	—	—	—
Oriental Stork	<i>Ciconia boyciana</i>	EN	I	I	I
Nordmann's Greenshank	<i>Tringa guttifer</i>	EN	I	I	II
Black-faced Spoonbill	<i>Platalea minor</i>	EN	I	—	II
Saker Falcon	<i>Falco cherrug</i>	EN	I	II	II
Rufous-backed Bunting	<i>Emberiza jankowskii</i>	EN	—	—	—
Swan Goose	<i>Anser cygnoides</i>	VU	I	—	—
White-naped Crane	<i>Grus vipio</i>	VU	I	I	II
Hooded Crane	<i>Grus monacha</i>	VU	I/II	I	I
Lesser White-fronted Goose	<i>Anser erythropus</i>	VU	I	—	—
Pallas's Fish-eagle	<i>Haliaeetus leucoryphus</i>	VU	I	II	I
Chinese Egret	<i>Egretta eulophotes</i>	VU	I	—	II
Greater spotted eagle	<i>Aquila clanga</i>	VU	I	II	II
Steller's Sea Eagle	<i>Haliaeetus pelagicus</i>	VU	I	II	I
Great Bustard	<i>Otis tarda</i>	VU	I/II	—	I
Far Eastern Curlew	<i>Numenius madagascariensis</i>	VU	I	—	—
Saunders's Gull	<i>Larus saundersi</i>	VU	I	—	—
Yellow-breasted Bunting	<i>Emberiza aureola</i>	VU	I	—	—

Criterion 3 :

Momoge wetland is located in the western edge of the Songnen Plain, and neighboring Horqin grassland. It is a typical wetland ecosystem for the biogeographic region, consisting of low plain wetland, temperate meadow and shallow water lakes in temperate meadow. The wetland has various ecosystem types, high species richness and biomass, which provide important habitat for a representative variety of birds for the region many of which are internationally threatened. According to preliminary investigations, the wetland has 469 vascular plant species in total; 52 fish species, 6 amphibian species, 8 reptile species, 298 bird species (52 rare and endangered birds which are listed in the national key protection), and 29 types of mammals. Since the improvement of the wetland ecological environment, the type and number of birds have shown a significant increase from the recorded 193 bird species up to 298. Waterfowl species rise from 90 to 120.

Criterion 5 :

Siberian Crane migration rises from 200 to 3800 annually. Other waterfowl, migrating and breeding here, rise from 50,000-100,000 to 200,000. The monitoring results show that there are 154,780 waterfowl breeding and migrating in Momoge Wetland in 2010, and 173,120 in 2011, and 206,300 in 2012, mainly with geese, ducks and shorebirds. The detailed data is listed in the appendix.

Criterion 6 :

According to the monitoring records, 13 waterfowl species in Momoge wetland exceed the 1% threshold of the regional population as follows.

NO.	Species	Latin names	Number counted			1% Threshold
			2010	2011	2012	
1	Great Crested Grebe	<i>Podiceps cristatus</i>	400-450	400-450	450-500	350
2	Oriental Stork	<i>Ciconia boyciana</i>	60-110	120-160	150-200	30
3	Eurasian Spoonbill	<i>Platalea leucorodia</i>	120-150	150-180	200-240	100
4	Bean Goose	<i>Anser fabalis</i>	20000-25000	15000-20000	30000-35000	30
5	Greater White-fronted Goose	<i>Anser albifrons</i>	4000-5000	5000-6000	8000-10000	180
6	Common Teal	<i>Anas crecca</i>	10000-15000	15000-20000	15000-20000	7700
7	Western Spot-billed Duck	<i>Anas poecilorhyncha</i>	10000-15000	10000-15000	15000-20000	1000
8	Siberian Crane	<i>Leucogeranus leucogeranus</i>	2000-3000	2000-3300	2000-3600	35
9	Hooded Crane	<i>Grus monacha</i>	15-20	20-30	50-60	10
10	Pied Avocet	<i>Recurvirostra avosetta</i>	1100-1200	1000-1100	1200-1400	1000
11	Black-tailed Godwit	<i>Limosa limosa</i>	8000-10000	10000-15000	20000-30000	1400
12	Spotted Redshank	<i>Tringa erythropus</i>	300-350	350-400	350-400	250
13	Common Redshank	<i>Tringa totanus</i>	1000-1200	1200-1400	1500-1700	1000

Criterion 7 :

There are 4 fish orders, 11 families and 52 species in Momoge wetland. Most fishes from Nenjiang River, Taoer River, Erlongtao River and Songhua River (migration in breeding stage) are distributed in the site. The site comprises a diversity of fish types, including subtropical, frigid and north temperate zones. The type and quantity of fishes are typical and representative in the Palaearctic region. *Erythroculter ilishaeformis*, *Elopichthys bambusa*, *Siniperca chuatsi*, *Silurus asotus*, and Amur pike *Esox reichertii* are five kinds of rare species in Nenjiang River.

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:

Temperate broad-leaf forests or woodlands, and subpolar deciduous thickets, Manchu-Japanese Mixed 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.

Geological and geomorphology: In geological formations, Momoge wetland is located in the western edge of the Songnen Plain, formed by the second subsidence zone in the northern part of China, belonging to the NNE Yingtai structure. Along the riverside is a vast alluvial plain. The terrain is flat and gently rolling. There are more than 30 bogs over a hundred hectares and the marsh developed in floodplain and bottomland.

Origin: Naturally originated

Soil: Soil can be divided into 7 groups and 17 subgroups, including meadow soil, chernozem, alluvial soil, boggy soil, light chernozem, aeolian sandy soil, saline-alkali soil, etc. pH value is between 7.5 and 8.5. Meadow soil, chernozem and alluvial soil are the major types in the Reserve. The soil is fertile with organic content is generally more than 2%, some of which can reach to 5%. The volume weight of soil is between 1.2 and 1.6.

Hydrology: The site is located in the convergence zone of Nenjiang River and Taoer River, belonging to the water system of Nenjiang River. The Nenjiang River, originating from Lemuel Cory Hill of Da Hinggan Mountains, flows through this area 111.50km, with the catchment area of more than 30,000 ha and average annual flow of 647.36m³/s. Taoer River, the southern boundary river, originates from Saul Qi Hill of Da Hinggan Mountains. After flowing to Yueliangpao, the Toer River flows through 60 kilometers to Nenjiang with the catchment area of more than 70,000 ha and the average annual flow of 14.47 m³/s. Erlongtao River and Huerda River, two seasonal river of Momoge Wetland, are respectively poured into Taoer River and Nenjiang River. The average annual precipitation of Momoge wetland is 391.8mm, and the average annual evaporation is 1,814mm. Myriads of bogs and lakes are formed when rivers converge into this area, such as Yueliang Bog, Etou Bog, Suolun Bog and Haernao Resservior.

Water quality: In accordance with the national standards of surface water quality, water quality of Momoge wetland belongs to class III, and pH value is between 7.2 and 7.6.

Water depth: Wetland belongs to prairie lakes, and water depth is increasing along with the distance between the shore, with the deepest part is 4~5 meter.

Water permanence : The water supply of the site is from Nenjiang River, Taoer River, as well as the 65km long channel connected with Nen water. The source is plenty and stable.

Fluctuations in water level : The water level of Momoge wetland (body water of Nenjiang River) is 128.5-133.45m, and the level of Yueliangpao is 127.00-131.00m.

Climate: Momoge wetland is of temperate continental monsoon climate with dry air and strong wind in spring, hot weather and heavy rain in summer, dry and cold weather in autumn, as well as heavy snow and cold temperature in winter. The average annual temperature is 4.2 °C. The hottest month is in July, whose monthly average temperature is 23.5 °C. The coldest month is in January, whose monthly average temperature is -17.4 °C. The annual average solar radiation is 124.71 kcal/cm² in total. The total sunshine hours and number of active accumulated temperature above 10°C is respectively 1339.9h and 2891.9°C. The duration of frost free period is 137 days. The average wind speed is 3.5m/s annually. There are 15.7 times of gale annually on average, concentrated between March and May.

17. Physical features of the catchment area:

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

Located in the convergence zone of Nenjiang River and Taoer River, the catchment area of the site is about 4.9×10^4 ha. It is one part of Basin of Songnen Plain, formed by the second subsidence zone in the northern part of New China. The northern part is higher and the terrain is flat and little rolling. The main soil type is chernozem soil, the rest of meadow soil, boggy soil, and a small amount of saline soil in the local region. Land use types are permanent rivers, lakes, freshwater marshes, pod marshes, flooded land, aquaculture ponds, rice fields, reservoirs, and drainage channels. The climate of catchment is temperate continental monsoon climate, with average annual temperature of 4.2 °C and sunshine hours of 2911.3h.

18. Hydrological values:

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

Momoge wetland can effectively replenish underground water to prevent the decline of water level. The Ramsar Site plays an important role in flood storage and natural disaster reduction, fishery industry, livestock farming, field irrigation. The wetland also can absorb and degrade pollutants from irrigation return water and surface runoff in order to purify the water quality. As a natural reservoir, Momoge wetland is rich in biodiversity, and is the ecological protection barrier and treasure house of resources in semi-arid areas of northeast China. Meanwhile, it is the material foundation and environmental capital for the sustainable development of local society and economics.

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.

Ts(32.2%), O(24.0%), Tp(18.0%), M(13.4%), 3(7.2%), 6(3.6%), 1(1.2%), 9(0.2%)

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.

With the meadow steppe landscape in temperate semi-arid region, the main habitat types include rivers, lakes, marshes, swamp meadows. There are several main plant communities in the site, such as *Phragmites australis*, *Deyeuxia angusifolia*, *Carex spp*, *Typha orientalis* *Aneurolepidium chinese* and *Chloris virgata* community. These plant communities not only constitute a relatively complex and diverse ecological landscape, but also provide a suitable habitat for cranes, storks, geese, ducks, shorebirds and herons and other waterfowl.

Meanwhile, the wetland plays an important role in preventing the large area of desertification and alkalization, maintaining local water sources, regulating the climate and maintaining regional ecological balance.

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 flora belongs to Eurasian steppe region, including sandy woodland, sandy scrub, grasslands, meadows, marshes and aquatic vegetation community types. Woodland vegetation mainly include two formations: *Ulmus pumila* woodland and *Ulmus macrocarpa* woodland; scrub vegetation is mainly *Prunus sibirica* shrub; Grassland vegetation is mainly constituted by *Leymus chinensis* steppe, *Lespedeza juncea* steppe; meadow vegetation include *Deyeuxia angustifolia*, *Hemarthria altissima*, *Juncus gracillimus*, *Inula salicina*, *Potentilla anserina* and *Puccinellia tenuiflora* meadow; marsh vegetation is mainly constituted by *Phalaris arundinacea*, *Typha angustifolia*, *Phragmites communis*, *Scirpus planiculmis*, *Carex rhynchophylla*, *Salix cheilophila* and other plants; aquatic vegetation is mainly consisted of *Polygonum amphibium*, *Lemna minor*, *Utricularia vulgaris*, *Lotus Nymphoides paltata* and other plants. There are 469 vascular plant species from 271 genera in 78 families.

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.*

Momoge wetland is an important breeding site and a migratory stopover for migratory birds in East Asia. According to recent surveys, there are 52 fish species from 11 families in 4 orders, 6 amphibian species from 3 families in 1 orders, 8 reptile species from 4 families in 2 orders; 29 mammal species from 11 families in 4 orders, 298 birds species from 50 families in 17 orders, of which include 120 kinds of waterfowl.

Besides the species listed in Criterion 2 of Section 14, there are 13 species under Class-II National Protection: *Cygnus cygnus*, *Anser albifrons*, *Aix galericulata*, *Grus grus*, *Numenius minutus*, *Athene noctua*, *Asio flammeus*, *Asio otus*, *Bubo bubo*, *Otus scops*, *Otus bakkamoena*, *Strix uralensis*, *Bubo scandiacus*.

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:

There exists agriculture, livestock farming, fishery, reeds and tourism in the Ramsar Site, which plays an important role in the local economic development. In the aspect of agricultural production, local special products represented by Nenjiang Bay Rice and Sukema millet have been on sale throughout the country. The annual output of fresh fish achieves 500 to 1000 tons, generating annual output value of 3 to 5 million.

Fossils of ancient bison and mammoth: A skull fossil of ancient bison and incisor and molar fossils were respectively unearthed at White Sand electric pumping station in 1983 and 1984, which provide an important clue for us to study geology and climate of ancient times in Momoge wetland, and to explore human footprints of the paleolithic times.

Zhushan Tombs: The tombs with diameter of about 500m, were located on the north side of Zhushan Bridge of Bai Qi highway in the middle of the site. Owing to the tomb form, funerary

objects and the situation of ruins nearby, it may be early Liao Dynasty tombs, linking with the Khitan ruins. Then we can say that Momoge has a long historical standing, and is rich in ancient 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?

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

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:

a) within the Ramsar site:

State ownership; the local government and related institution in the district have the tenure of land use.

b) in the surrounding area:

State ownership; the local government and collective have the tenure of land use.

25. Current land (including water) use:

a) within the Ramsar site:

Aquaculture fish ponds rice fields reservoirs drainage channels, and woodlands.

b) in the surroundings/catchment:

The surrounding farmland, grassland and woodland are engaged by local forestry department and township.

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:

To some extent, livestock farming production affects wetland ecological characteristics, resulting in the degradation of the meadow.

b) in the surrounding area:

Parts of subsidized water from rice fields flow into Momoge wetland, becoming a potential threat and causing water pollution.

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.

The People's Government of Jilin Province approved the establishment of Momoge Provincial Nature Reserves in March 1981. And it was approved to be promoted to a national nature reserve in December 1997 by the State Council. "Wetland Protection Ordinance in Jilin Province" has taken into effect since March 1, 2011.

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

Momoge wetland takes the endangered species *Leucogeranus leucogeranus*, *Ciconia boyciana*, *Grus japonensis* etc. and their habitats as the main protection object.

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

Master Plan of Jilin Momoge National Nature Reserve (2001). According to design requirements of the "master plan", the first three periods of project construction for infrastructure were completed from March 2002 to March 2011.

d) Describe any other current management practices:

The management of the reserve is on the basis of the "PRC Regulations on Nature Reserves", "Regulations on Nature Reserve in Jilin Province", and "Jilin wetland protection regulations" and "Wetland Protection Ordinance in Jilin Province".

28. Conservation measures proposed but not yet implemented:

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

None.

29. Current scientific research and facilities:

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

Since Momoge reserve was built, scientific investigation and research work have been developed by Chinese Forestry Science Institute, Jilin Provincial Forestry Science Institute, Northeast Normal University, Beijing Forestry University etc. Some kinds of achievements have been made, including the background of resources and environment. The research department in the reserve has participated and completed 26 international and domestic scientific research projects, and six research projects are being conducted.

From 2003 to 2009 the reserve was listed as one of the implementation places of the *Leucogeranus leucogeranus* GEF project organized by the United Nations Environment Program. And the research projects, such as animal and plant resources investigation, wildlife and hydrological background investigation, water resource management, habitat correlation factors, were carried out.

The main scientific monitoring work of the reserve are wetland vegetation monitoring, wetland waterfowl monitoring, wetland hydrology monitoring, key species (*Leucogeranus leucogeranus*) monitoring. The reserve invited senior experts from Institute of Northeast Geography and Agroecology of Chinese Academy of Sciences to compile "Wetland ecological monitoring manual for Momoge National Nature Reserve, which makes the monitoring work in the reserve more scientific and standardized.

The reserve strengthens the infrastructure and capacity building of protection, scientific research and publicity and education activities. It has set up 8 field research stations and has increased the observation and monitoring instruments such as telescopes, night vision devices and GPS. The reserve strengthens the training of staff to comprehensively improve their professional quality.

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.

Jilin Momoge National Nature Reserve is equipped with rescue center, wetland museum, etc., which is responsible for education on the awareness of environmental protection to the public.

The reserve carries out publicity and education activities over the years. It publishes special issues and distributes leaflets during "World Wetlands Day", "Bird Week" and "World Environment Day". The reserve published some CDs and promos, such as "*The Rare Bird Paradise*", "*The Vast Wetland, Birds' Paradise*", "*Siberian Crane's Hometown*", "*Momoge's Guide Handbook*" etc.

The reserve was identified as the popular science education base by the Chinese Forestry Association, Association for Science and Technology of Jilin Province and Jilin Provincial Forestry Association.

The site implements a model that the Reserve mainly carries out management and protection of the wetland and cooperates with community to co-build and co-management, in order to encourage community resident to participate in wetland conservation. For example, a 4800ha habitat for the endangered Siberian Crane *Leucogeranus leucogeranus* was created in Etou bog.

31. Current recreation and tourism:

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

Tourism industry, which started relatively late in Momoge, is at an early stage of development. There are now four bird observation hides in the reserve, respectively situated at Etou Bog, Haernaodaogendao, Mitai and the office place of the reserve.

32. Jurisdiction:

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

Regional: The Government of Zhenlai County, Hubei Province

Functional: Forestry Bureau of Jilin Province, State Forestry Bureau

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.

Definition: Bureau of Jilin Momoge National Nature Reserve

General Director: Gui YIN

Address: Momoge Reserve, Momoge Township, Zhenlai County, Jilin Province

Post: 137316

Tel: +86-(0)436-7811545, +86-(0)436-7811977, +86-(0)436-7811966

Fax: +86-(0)436-7811900

Email: mmgsxw@163.com

34. Bibliographical references:

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

Udvardy, M.. 1975. *Classification of the Biogeographical Provinces of the World*. IUCN Occasional Paper. No. 18.

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Appendix:

NO.	Species	Latin Names	Waterfowl counted		
			2010	2011	2012
Total			154780	173120	206300
1	Little Grebe	<i>Tachybaptus ruficollis</i>	1500	2000	2100
2	Great Crested Grebe	<i>Podiceps cristatus</i>	450	450	500
3	Grey Heron	<i>Ardea cinerea</i>	800	700	750
4	Purple Heron	<i>Ardea purpurea</i>	500	550	600
5	Great Egret	<i>Casmerodius albus</i>	500	550	500
6	Black-crowned Night-heron	<i>Nycticorax nycticorax</i>	500	400	400
7	Chinese Pond-heron	<i>Ardeola bacchus</i>	200	300	350
8	Oriental Stork	<i>Ciconia boyciana</i>	110	160	200
9	Eurasian Spoonbill	<i>Platalea leucorodia</i>	150	180	240
10	Bean goose	<i>Anser fabalis</i>	25000	20000	35000
11	Greater White-fronted Goose	<i>Anser albifrons</i>	5000	6000	10000
12	Common Teal	<i>Anas crecca</i>	15000	20000	20000
13	Mallard	<i>Anas platyrhynchos</i>	18000	20000	22000
14	Western Spot-billed Duck	<i>Anas poecilorhyncha</i>	15000	15000	20000
15	Northern Pintail	<i>Anas acuta</i>	1000	800	800
16	Common Pochard	<i>Aythya ferina</i>	22000	25000	20000
17	Baikal Teal	<i>Anas formosa</i>	15000	17000	15000
18	Common Goldeneye	<i>Bucephala clangula</i>	500	450	400
19	Common Merganser	<i>Mergus merganser</i>	5000	8000	7000
20	Smew	<i>Mergellus albellus</i>	500	600	500
21	Siberian Crane	<i>leucogeranus leucogeranus</i>	3000	3300	3600
22	Common Moorhen	<i>Gallinula chloropus</i>	600	700	600
23	Common Coot	<i>Fulica atra</i>	500	600	500
24	Northern Lapwing	<i>Vanellus vanellus</i>	2000	2200	2000
25	Grey-headed Lapwing	<i>Vanellus cinereus</i>	1000	1200	1100
26	Little Ringed Plover	<i>Charadrius dubius</i>	500	600	550
27	Kentish Plover	<i>Charadrius alexandrinus</i>	600	550	600
28	Black-tailed Godwit	<i>Limosa limosa</i>	10000	15000	30000
29	Spotted Redshank	<i>Tringa erythropus</i>	350	400	400
30	Common Redshank	<i>Tringa totanus</i>	1200	1400	1700
31	Curlew Sandpiper	<i>Calidris ferruginea</i>	500	600	650

32	Pied Avocet	<i>Recurvirostra avosetta</i>	1200	1100	1400
33	Black-winged Stilt	<i>Himantopus himantopus</i>	2000	2200	2300
34	Oriental Pratincole	<i>Glareola maldivarum</i>	1000	800	800
35	Black-headed Gull	<i>Larus ridibundus</i>	1600	1800	1500
36	Whiskered Tern	<i>Chlidonias hybridus</i>	1000	1200	1000
37	White-winged Tern	<i>Chlidonias leucopterus</i>	1000	1300	1200
38	Hooded Crane	<i>Grus monacha</i>	20	30	60