



CHINA NATIONAL WETLAND CONSERVATION ACTION PLAN

State Forestry Administration P.R.China



CHINA FORESTRY
PUBLISHING HOUSE

List of Steering Group Members for *China National Wetland Conservation Action Plan*

In December 1994, a working group was appointed to compile the *National Wetland Conservation Action Plan for China*. In 1998, due to government reform, the composition of the group members was changed, through consultation. The members of *China National Wetland Conservation Action Plan* Steering Group are listed below:

Focal Unit:

State Forestry Administration

Member Units:

Ministry of Foreign Affairs of the People's Republic of China

State Development and Planning Commission of the People's Republic of China

Ministry of Education of the People's Republic of China

Ministry of Science and Technology of the People's Republic of China

Ministry of Public Security of the People's Republic of China

Ministry of Finance of the People's Republic of China

Ministry of Territory and Resources of the People's Republic of China

Ministry of Construction of the People's Republic of China

Ministry of Communications of the People's Republic of China

Ministry of Water Resources of the People's Republic of China

Ministry of Agriculture of the People's Republic of China

State Administration of Environmental Protection

Chinese Academy of Sciences

State Administration of Light Industry

State Administration of Oceanography

China Petroleum and Natural Gas Co., Ltd.

Introduction^{*}

Like other natural resources (forest, farmland and ocean), wetland resources are multi-functional. Wetlands are areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres. In addition, wetlands may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six metres at low tide lying within the wetlands. Thus wetlands cover all areas of permanent or seasonal water including swamps, peatland, wet meadows, lakes, rivers, floodplains, deltas, mudflats, coral reefs, mangroves, water reservoirs, ponds, paddy fields and the coastal zone to a depth which at low tide does not exceed six metres.

Being closely linked with the survival and development of humankind, wetlands are a rich and ecologically wonderful source of biodiversity and one of the most important environments for human survival. Wetlands not only provide human beings with a source of livelihood, but also offer huge environmental benefits/functions that other systems do not, such as flood mitigation, water diversion/storage, climate regulation, water purification, erosion control, land formation by siltation and environment beautification. Wetlands have been described as the 'kidney' of the earth. IUCN, UNEP and WWF have identified wetlands as one of the world's three most important eco-systems in addition to forests and oceans.

Because of her vast territory, complicated geography and range of climates, China is home to all the types of wetlands that are classified by *the International Convention on Wetlands*. China's wetlands provide great economic, ecological and social benefits, and therefore it is very important to conserve such valuable ecosystems. However, due to a population increase and economic development in China, land reclamation has mostly affected wetlands, and has led to their loss and degradation and hence their services. Over – fishing, hunting, logging and collecting of wetland resources have caused a decline in wetland biodiversity. Excessive water abstraction has caused salination and the shrinkage of lakes. Pollution from agriculture, industry and human sewage threaten the wetland environment. Over – logging and vegetation destruction have accelerated soil erosion and the

* The text of this *Action Plan* does not include information on Macao SAR and Taiwan Province.

siltation of river/lake systems. Statistics show that China has lost an area of lakes equal to the total area of her five largest lakes as a result of lakeshore reclamation; 32.5 billion m³ that could have contributed to flood regulation and other benefits have been lost, which means that China has suffered a loss of 35,000 million m³ of fresh water annually since 1960. Approximately half of China's coastal wetlands has been lost to reclamation. About 3 million ha of marshland in Sanjiang Plain, China's largest marsh area, have been converted to farmland and the remaining 1.04 million ha is still facing the threat of reclamation. Due to improper water use, Lakes Manas, Lop Nur and Juyanhai have already become saline deserts. Of 1200 monitored rivers, 850 are polluted and the total length of rivers that no longer harbour shrimp or fish exceeds 5322 km. The water bodies of more than 90% of cities are polluted and 50% of major cities have no drinking water that meets acceptable hygiene standards. About 50% of lakes have become eutrophic, which is harmful to fisheries, agriculture and the health of the people.

To protect wetlands is to protect humankind itself. As inhabitants of our planet we are obliged to protect wetlands. Between 1971, when the *Ramsar Convention* was established, and June 2000, 121 countries joined the Convention as contracting parties. Some 1027 wetland sites with a total area of 80 million ha have been added to the *Ramsar List of Wetlands of International Importance*. The conservation and wise use of wetlands is now an important topic worldwide, and the international community pays increasing attention to it. The Government of China joined the *International Convention on Wetlands* in July 31 1992 and designated seven wetland sites as *Wetlands of International Importance*. They are Zhalong Nature Reserve (NR) in Heilongjiang Province, Xianghai NR in Jilin Province, East Dongting Lake (Dong Dongtinghu) NR in Hunan Province, Poyang NR in Jiangxi Province, Niaodao (Bird Island) NR in Qinghai Province, Dongzhaigang NR in Hainan Province and Mai Po Marsh & Inner Deep Bay in the Hong Kong Special Administrative Region (SAR). The conservation and wise use of the wetlands of China have been listed as a priority area of China's *Agenda 21* and the *China National Action Plan for Conservation of Biodiversity*, and this to some extent has promoted the conservation and management of wetlands in China. The extremely serious flooding disasters on the Yangtze, Nengjiang and Songhuajiang River that occurred in the summer of 1998 raised awareness in the government and public of the need to conserve wetlands, and since then a sound foundation has been laid in favour of the overall and scientific management and wise use of wetlands. The need to formulate a *China National Wetland Conservation Action Plan* that addresses the real needs of the country's social and economic development and reflects international trends in conservation development is vital, and it is also imperative that the *International*

Convention on Wetlands is implemented by the Government of China.

China National Wetland Conservation Action Plan provides guidelines for the conservation, management and sustainable use of wetlands. The main contents of the plan:

1. A Brief Account of Wetlands in China
2. The Current Status of Wetland Conservation and Management in China
3. Major Problems and Their Causes in Wetland Conservation and Wise Use
4. The Importance of Wetland Conservation and Wise Use in China
5. The Guiding Principles and Objectives for Wetland Conservation and Wise Use in China
6. Priorities for Wetland Conservation in China

Explanatory Note

The whole world has begun to pay wide attention to conserve wetlands and use them wisely: wetlands form one of the most important resources for the sustainable development of national economy. After China joined the *International Convention on Wetlands* in 1992, the State Council assigned the Ministry of Forestry as the focal unit to co-ordinate implementation of the International Convention on Wetlands. In order to implement the obligations of the Convention in an appropriate way and mobilize the efforts of the relevant agencies, the Ministry of Forestry made broad contact with many government units and international organisations. A consensus was reached between both national and international organisations that there was an urgent need to formulate a *China National Wetland Conservation Action Plan*, with broad participation, to address real needs and reflect international trends in wetlands conservation. Such an *Action Plan* should form guidelines for the conservation and wise use of wetlands in the future. The Ministry of Forestry, as the central organization, working together with 17 other ministries/agencies, has started to work on the *Action Plan*. After five years, the *Action Plan* was completed. Before its publication by the State Administration of Forestry, the *Action Plan* was approved by the Ministry of Foreign Affairs, State Development and Planning Commission, Ministry of Education, Ministry of Science and Technology, Ministry of Public Security, Ministry of Finance, Ministry of Territory and Resources, Ministry of Construction, Ministry of Communications, Ministry of Water Resources, Ministry of Agriculture, State Administration of Environmental Protection, Chinese Academy of Sciences, State Administration of Light Industry, State Administration of Oceanography and China Petroleum and Natural Gas Co., Ltd.

1. The Need for an *Action Plan*

How to conserve wetlands and use them wisely is an important issue that should not be ignored when the earth's ecological environment is worsening. In the 50 years since the People's Republic of China was founded, some successes in wetland conservation have been achieved. However, rapid economic development and the increased dependence of production and human livelihoods on wetland resources are leading to the destruction of

wetland ecosystem and biodiversity. Taking the country as a whole, for example, the area of wetland sites continues to decline and wetland ecosystem face severe threats. The two flooding disasters that occurred in 1998 and 1999 illustrated the close relationship between floods and the vastly reduced quantity and quality of wetlands, therefore conserving wetlands and using them wisely is an urgent task for China. The serious situations in which ecological amelioration and wetland conservation find themselves today have urged us to compile and implement this *Action Plan*.

At present, wetland conservation and wise use touch many sectors, however, no laws or regulations exist to manage activities that take place in wetlands. Lack of effective and integrated co-ordination mechanisms and strategic planning/guidelines have made it impossible to formulate enforceable legislation that controls activities that impact on wetlands. This Action Plan will serve as a programme document that guides wetland conservation and management and the sustainable use of wetland resources in the future. It will facilitate scientific conservation and wise use of wetlands, promote good wetland planning and establish an integrated co-ordination mechanism.

To compile and implement an Action Plan is an important obligation of the Chinese Government under the International Convention on Wetlands of International Importance (usually referred to as the Convention on Wetlands). This is an important intergovernmental treaty on the importance and urgency of wetland conservation and wise use. The aim of the Convention is to conserve wetland ecosystems – especially those that are important waterfowl habitats – through international cooperation, thereby rescuing the fast disappearing wetlands and endangered waterfowl species of the world. The Government of China became party to the Convention on July 31, 1992, and since then China has been obliged to implement the terms of the Convention. The Convention clearly states in article 3.1 that “the Contracting Parties shall formulate and implement their planning so as to promote the conservation of the wetlands . . . , and as far as possible the wise use of wetlands in their territory”. The *Strategic Plan 1997 – 2002*, adopted at the 6th Meeting of the Contracting Parties, indicates that all member countries are required to develop and encourage national as well as local programmes and decisions on wetland conservation and wise use that combine all relevant management plans. In view of the important status and role of Chinese wetlands in global terms, it is vital to formulate an *Action Plan* as a nationwide document for action aimed at providing guidance on effective conservation, scientific management and wise use of wetlands.

2. The Formulation of the *Action Plan*

Based on the instructions of the State Council and the actual needs of wetland conservation and management, in late 1994 the Ministry of Forestry together with other 13 government agencies, including the Ministry of Foreign Affairs and the State Planning Commission, formed a steering group to deal with the formulation of the *Action Plan*. Later, in November 1995, a meeting was organised by the Ministry of Forestry to work on an outline for the *Action Plan* and the division of the workload among participating agencies. After the first two drafts were completed, a workshop was held with the aim of incorporating comments provided by both national and international experts as well as government agencies, and subsequently a third draft was formulated. In 1998, the central government underwent a restructuring process that included changing/adjusting the functions of government agencies. After restructuring, the State Forestry Administration (formerly the Ministry of Forestry) and other relevant agencies reached a consensus that the Steering Group should be enlarged to comprise 17 agencies. The enlarged Steering Group reviewed and revised the third and fourth drafts of the *Action Plan*. During review of the fourth draft, the participating agencies together with the representatives of international organisations suggested that the structure of this draft be adjusted to add content stressing the importance of wetland conservation. In November 1999 a meeting was held with the participation of national experts to review the fourth draft and, based on comments made at this meeting, a final draft was formulated. In June 2000 the Steering Group approved the text of the *Action Plan* in principle. After approval by the relevant ministries and commissions, the *Action Plan* was promulgated by the State Forestry Administration for nationwide implementation.

3. The Contents of the *Action Plan*

The *Action Plan* consists of the main text and annexes. The main text includes six chapters: A Brief Account of the Wetlands of China; The Status of Wetland Conservation and Management in China; Major Problems and their Causes in the Conservation and Wise Use of Wetlands in China; The Importance of Wetland Conservation and Use in China; The Guiding Principles and Objectives of Wetland Conservation and Wise Use in China; and Priorities for Wetland Conservation in China.

● A Brief Account of the Wetlands of China

This chapter gives an introduction to the features of China's wetlands, including wetland types and resources, and the status of the reserves that have been designated as Ramsar sites.

● **The Status of Wetland Conservation and Management in China**

This chapter describes legislation, policies, planning, international co-operation, organisational structure dealing with wetland conservation and the activities undertaken in wetland conservation and wise use. The situation with regard to wetland conservation and work undertaken in the past 50 years is reviewed.

● **Major Problems and their Causes in the Conservation and Wise Use of Wetlands in China**

The major problems faced by wetland conservation in China are: uncontrolled reclamation and 'improvement' of wetlands, over-harvesting of wetland resources, unwise use of water resources, increased pollution of wetlands, worsening siltation and increasing erosion of coastal areas.

● **The Importance of Wetland Conservation and Use in China**

This chapter reviews the history of wetland use in China and describes the importance of Chinese wetlands.

● **Guiding Principles and Objectives for Wetland Conservation and Use in China**

The chapter describes the guiding principles of wetland conservation together with conservation objectives and targets for the government at central and local levels in the field of wetland conservation and use.

● **Priorities for Wetland Conservation in China**

To address the problems faced by wetland conservation in China, this chapter specifies concrete activities:

- create or improve legislation to protect wetlands;
- set up a co-ordination mechanism for wetland management;
- reduce the speed of wetland degradation through integrated management and use;
- conserve wetland wildlife resources by enhancing the establishment and management of nature reserves;
- undertake public awareness education and training of human resources;
- conduct a survey and produce an inventory to assist in monitoring wetland re-

sources ;

- promote the sustainable use of wetland resources ;
- strengthen research on wetlands ;
- conduct specific activities for wetland conservation ;
- enhance international co-operation .

**The Office of the Steering Committee for the
China National Wetland Conservation Action Plan
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Chapter 1

A Brief Account of the Wetlands of China

China is located in the southeast of the European – Asian landmass. The country covers very large terrestrial and marine areas, and the physical characteristics of different parts of the country vary greatly. Due to its complicated geography and environmental and climatic conditions, China is a country with an enormous number of wetlands and a complete set of wetland types.

1.1 Wetland Resources of China

1.1.1 Characteristics of Wetlands in China

The wetlands of China are characterised by their multiple types, huge numbers, notable differences between regions, and rich biodiversity.

● **Multiple Types** According to the definition of the Convention on Wetlands, there are 31 types of natural wetlands and 9 types of artificial wetlands. All these can be found in China, the main types being marshes, lakes, estuaries, coastal inter – tidal flats, shallow seas, and reservoirs, ponds and rice fields.

● **Large Area** The total area of wetlands in China is 65.94 million ha (not including rivers and ponds); this is 10% of the world's wetland areas. In terms of wetland area, therefore, China ranks first in Asia or fourth in the world. China's natural wetlands cover an area of 25.94 million ha; this figure includes marshes (11.97 million ha), natural lakes (9.1 million ha), inter – tidal flats (2.17 million ha) and shallow seas (2.7 million ha). Artificial wetlands cover an area of 40 million ha and include reservoirs (2 million ha) and rice fields (38 million ha).

● **Wide Distribution** China's wetlands are widely distributed: from the cold temperate zone to the tropical regions, from coastal to inland areas and from plains to high plateaux. Moreover, even in a single area different types of wetlands are found, or one type of wetland may be found in many different places, thus rich and diversified integrated wetland types are formed.

● **Notable Differences between Regions** Eastern China is known as an area with many rivers and lakes and Northeastern China is marked by its wide distribution of marshes, however, Western China, due to its arid nature, has a very limited number of wetlands. The lakes and wetlands are concentrated mostly in the areas surrounding the lower and middle reaches of the Yangtze River and the Qinghai – Tibetan Plateau. The wetlands in the arid area of the Qinghai – Tibetan Plateau and Northwestern China are mainly salt-water/salt lakes. The coastal area from Hainan Island to the north of Fujian Province, being a tropical and sub – tropical zone, has a wide distribution of special and unique mangrove forests. One of the environmental features of the Qinghai – Tibetan Plateau is the presence of a large area of plateau marsh and the world's highest lakes.

● **Rich Biodiversity** Possessing so many types of wetland habitats, China is known for its enormous number of wetland species, many of which are unique to China and are therefore of great scientific and economic significance. Rough estimates show that China harbours wetland plant species representing 101 families, including 94 families of vascular plants, and more than 100 species have been considered to be endangered. The wetland species of China's coastal areas number c. 8200, including 50,000 plant species and 3200 animal species. In inland areas, China has 1548 species of higher wetland plants and 1500 species of higher animals. The country has more than 770 freshwater fish species/sub – species, including many migrant species that spawn in specific wetland habitats. China is famous for her diversity of bird species; the country holds 31 (54%) of Asia's total of 57 endangered wetland bird species. Of the 166 Anatidae species found in the world, China has 50 (30%); of the world's 15 crane species China has to date recorded nine. Moreover, many transboundary migrants stop over in China. It should be pointed out that some migrant species winter or stop over only in China, e.g., the population of Siberian Crane *Grus leucogeranus* found at Poyang Lake represents more than 95% of the world total.

1.1.2 The Main Types of Wetlands in China

● **Marsh** Marshes cover an area of 11.97 million ha in China, mainly on Sanjiang Plain, Daxing'anling and the Xiaoxing'anling area of Northeast China, Zolge plateau, and coastal, lakeshore and riverine areas. On the plains the marshes are covered by herbaceous plants, whereas in marshes in mountainous areas woody species predominate.

(1) **Sanjiang Plain** Sanjiang Plain, located in Northeast China, is the largest freshwater marsh. It is formed by three rivers, the Heilongjiang (Amur), Songhuajiang and Wusulijiang (Ussuri). In 1990 the marshy area of Sanjiang Plain covered an area of

1.13 million ha. Generally, the marsh in Sanjiang Plain does not have a peat base but has a sponge-like layer composed of grass roots, thus forming a loose but extremely water-absorbent body. The main economic activities on the plain, such as agriculture/food production, are based on the use of natural resources.

(2) Daxing' anling and Xiaoxing' anling Area This area has a very broad distribution of bogs, which cover 9% of the total area of Daxing' anling and 6% of Xiaoxing' anling. The bogs are characterised by a highly developed peatland system, in particular forest peatland and meadow peatland. The Daxing' anling and Xiaoxing' anling Area is one of the richest areas for peat in the whole of China.

(3) Zolge Plateau The Zolge Plateau lies on the northeastern margin of the Qinghai-Tibetan Plateau; it is the largest and densest area of peat-based wetlands in China. This is particularly true of the middle and downstream reaches of the Heihe River, where a wide wetland with a high peat content lies in a broad valley. Wetlands occupy 20-30% of the total area of the plateau. One feature of this Plateau is that many marshes are developed in an integrated way with a large proportion of peat of high nutritional value. Zolge Plateau is one of China's most important grasslands.

(4) Coastal, Lacustrine and Riverine In China the extent of these types of wetlands almost matches the range over which reeds grow. Coastal wetlands with reeds extend from the Yangtze River estuary northwards to the estuary of the Yalu River. The silted deltas of river estuaries are the areas where there is concentrated reed growth. Around large lakes large reed-beds of varying width are commonly found. In addition, all rivers - whether inland or flowing to the sea - are fringed with reeds, especially in their lower reaches.

● **Lakes** There are many lakes in China, with different regional features. There are 2711 lakes greater than 1 km² in area, and the total area of all China's lakes amounts to 90,864 km². The lakes can be divided into five regions according to natural conditions and regional features of resource utilisation and ecological approaches.

(1) Eastern Plain The lakes of the Eastern Plain are distributed mainly in the middle and downstream reaches of the Yangtze, Huaihe and Haihe Rivers, as well as along the Grand Canal. There are 696 lakes (of more than 1 km²) in this region, with a total area of 21,171.6 km², accounting for 23.3% of the total area of the lakes in China. All the five famous lakes (Poyang, Dongting, Taihu, Hongze and Chaohu) are located in this region. The aquatic status of these lakes varies; they are characterised by high biological productivity and strong human interference. The lake resources are utilised mainly for flood regulation, water supply, the aquaculture industry and water transport, or reclaimed for

cultivation.

(2) Mongolia Xinjiang Plateau There are 724 lakes (of more than 1 km²) in this region, with a total area of 19,544.6 km², accounting for 21.5% of the total area of China's lakes. The region is characterised by dry climate and high evaporation. Due to the high evaporation (which exceeds water inflow) most of the lakes are saline. The lake resources are utilised mainly for salt - based production.

(3) Yunnan and Guizhou Plateau There are 60 lakes (of more than 1 km²) in this region, with a total area of 1199.4 km², accounting for 1.3% of the total area of lakes in the country. All the lakes are freshwater. The water circulates over a long time - scale, and the ecological system is quite fragile. The lake resources are utilised mainly for irrigation, water supply, navigation, aquaculture, energy generation and tourism.

(4) Qinghai - Tibetan Plateau There are 1091 lakes (of more than 1 km²) in this region, with a total area of 44,993.3 km², accounting for 49.5% of the area of lakes in the country. The Yellow, Yangtze and Yarlung Zangpo Rivers have their origins here. The water in these lakes comprises ice - and snowmelt. Due to the fact that outflow exceeds inflow, the lakes are in the process of shrinking. The lakes are saline, and the lake resources are utilised mainly for salt - based production.

(5) Northeast China There are 140 lakes (of more than 1 km²) in this region, with an area of 3955.3 km², accounting for 4.4% of the country's total lake area. The inflow during the flooding season (June - September) constitutes 70 ~ 80% of the annual total. The highest water levels are in summer and the lowest in winter. The lakes are frozen for very long periods. The lake resources are utilised mainly for irrigation, aquaculture, navigation, energy generation and tourism.

● **Rivers** There are 50,000 rivers in China that have a basin area of more than 100 km² and 1500 rivers with a basin area of more than 1000 km². Due to topography and climate, the distribution of the rivers is not even. The majority of the rivers are found in East China, where the climate is warm with abundant rainfall. Northwest China, where the climate is dry with a very limited rainfall, has a few rivers, and there are large regions with no rivers at all. Starting from the west of Mt. Daxing'anling and stretching southwards, to China's west border, via Mt. Yingshan, Mt. Helanshan, Mt. Qilianshan, Mt. Bayan Kara, Mt. Nianqing Tangula and Mt. Gangdis, is the boundary separating inland river systems and out flow rivers. On the east, and south of the boundary, rivers flow into the ocean, covering 65.2% of China's territory, among which 58.2% are river basins that flow into the Pacific Ocean, 6.4% to the Indian Ocean, and 0.6% to the Arctic Ocean. All the rivers located in the north and west of the boundary are inland rivers, except