

By Gao Jixi

PROTECTING CHINA'S ECOLOGICAL ENVIRONMENT

Construction and Restoration

Translated by Zhu Jianting, Li Rong & Wang Wenliang



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Preface

hina has a vast area of about 9.6 million square kilometers and ranks No. 3, next only to Russia and Canada, in the world. Having complex climatic, topographic and natural conditions and scarce arable land area, it faces a bigger challenge in environmental protection. Since the opening-up and reform in 1978, the government has put great stress on environmental protection and engineering. This has resulted in significant improvement to the ecological environment in key regions as also in biodiversity. Numerous rare animals and plants as well as endangered species have been brought under protection. China has taken a series of measures to protect and improve the living environment in the process of resource exploitation. In many parts of the country, beautiful nature with green hills and blue waters has made a reappearance.

At present, China's forest cover stands at 175 million hectares, yielding a coverage rate of 18.21%. With a man-made forest area of one third of the world total, China ranks No. 1 in forest plantations in the world. As a country with the fastest growth in forest resources, China will have a forest coverage above 20% by 2010 and 26% or above by 2050 and achieve a consistent

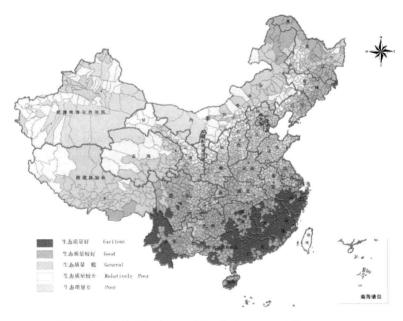
utilization of permanent green hills.

China has extensive grasslands, covering 400 million hectares or 41.7% of the territory. China boasts a wetland area of about 38.48 million hectares, which is the most in Asia and the fourth in the world. The area under wetland nature reserves is 16 million hectors, or about 40% of the total.

China's total fresh water resources stand at 2.8 trillion cubic meters, placing it No. 6 in the world. The zigzag 18,000km-long coastline forms numerous harbors and boasts abundant coastal zone resources.

In recent years, China's forest, grassland, wetland, cropland, oasis, fresh water and ocean ecological systems have been greatly promoted by a series of effective measures such as conversion of cropland to forest, grazing lands to grassland and lakes to cropland and energy-saving and emission-reduction.

China is the home to about 30,000 types of plants, more than 10% of the world total, including 200 genus and 17,300 species of endemic plants, covering nearly all kinds of vegetation in the world except polar tundra plants. China ranks No. 1 with its 6,300-plus kinds of vertebrates. It is home to numerous rare animals and plants such as the giant panda, the Yangtze River dolphin, metasequoia and gingko, dubbed "living fossils". Currently, most wild animals under key protection are



National Ecological Environment Quality Assessment (County area as a Unit)

under effective shelter and the status of endangered species stands significantly improved.

The contradiction between China's economic and social development and the restrictions placed by resources and environment is becoming increasingly sharp, posing a severe challenge to environmental protection. In fighting pollution, China is committed to achieving a 10% reduction in SO2 and COD emission by 2010.

China is striving to build an environment-friendly society, carrying forward the national policies of resource saving and environmental protection and constructing a renewable and sustainable national economy system with low investment, high output, low consumption and low pollutant discharge.

The Chinese Government regards the improvement of both the urban and rural living environment as an integral part of environmental protection and has promoted urban and rural forestation and ecological construction through a range of legislative and other measures, with outstanding results.

I Protection & construction of China's main ecosystem



Forest ecosystem

China's vast area and complicated climatic, topographic and natural conditions shelter a variety of plants and rich forest resources with diverse ecological systems. The forest ecological system of China plays a critical role in sustainable development, ecological safety and protection of the bio-diversity of the world economy. Currently, China is working on several forest projects such as Three-North (Northeast China, North China and Northwest China) Protection Forest, Yangtze River Valley Protection Forest, Coastal Protection Forest, Pearl River Valley Protection Forest, Taihang Mountain Forestation Project and Plain Forestation Project.

Natural forests

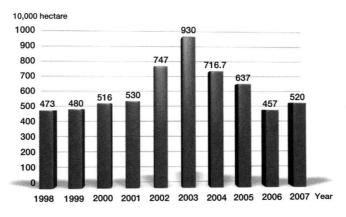
Natural forests account for 70% of the existing forest area in China. After the catastrophic floods in 1998, China started the natural forest resource protection project which mainly addresses rehabilitation and recovery to realize harmonious development of the ecology, society and economy. The pilot work began in 1998 and was rolled out in 17 provinces, autonomous regions and municipalities across China in 2000. The project covers the period 2000 to 2010 with a total investment of 96.2 billion yuan, involves



Forests planted in the Natural Forest Protection Project in the Three Gorges Reservoir Area, Yunyang County, Chongqing. A photo taken in Oct. 2005.

734 counties of 17 provinces, autonomous regions and municipalities, and provides practical protection to the upper reaches of the Yangtze River, the upper and middle reaches of the Yellow River as well as natural forests in key state-owned forest regions in Northeast China and Inner Mongolia.

Till 2007, a total of 4,328,200 hectares of barren mountain forestation and 8,849,600 hectares of afforestation of desert lands had been completed.



1998-2007 National Forestation Statistics

The forest management and maintenance area is kept at 90 million hectares each year, resulting in accumulated lumbering decrease of 130.825 million cubic meters (calculated based on 32.054 million cubic meters of lumber in 1997, the starting year of the project) and reduction in the consumption of forest stock of 252.0713 million cubic meters. With the continuous increase of forest resources in the project area, soil and water losses have been reduced. The forestry structure is becoming more diversified.

Conversion of croplands to forests and grazing fields to grasslands

Today, Wuzhai County, Xinzhou of Shanxi, a place

in northwest Shanxi in the Loess Plateau, has said goodbye to the dusty and sandy days of the past. Swinging green trees and smooth meadows are a dominant view from the hills nearby. The forests of the county cover 5.5 hectares with a vegetation coverage rate of 52% achieved by grazing bans and forestation in the hills. The natural environment has undergone a major change. Wuzhai was named the Ecological Demonstration County by the State Environmental Protection Administration (now known as the Ministry of Environmental Protection). The production conditions have also been greatly improved, and the villagers say the "greening" has given them a better life.

Korshinsk Peashrub is a perennial easy-growing shrub that can withstand desert conditions and has a strong capacity to conserve water and fertilizer. The county now has a Peashrub planting area of 38,000 hectares. The tender leaves of the plant are enough to feed the sheep of the whole county. Wherever the Korshinsk Peashrub seeds go, there is greenery.

The ecological construction in Wuzhai is based on the integration of forestation and a ban on grazing. Even in the barren Xishaliang Hump of the county, more than 40,000 hectares of dunes are covered with vegetation, presenting a picture of undulating green hills. The greening effort has changed

the appearance of Wuzhai's hills and rivers and put the county on a development path of dense forests and abundant grain.

Conversion of croplands to forests and grazing pastures to grasslands is widespread in China. The cultivation of arable lands located at the slopes, that cause water and soil loss and lead to desertification, is to be ceased. Trees and grasses shall be planted as required and forest vegetation recovered.

In 1999, Sichuan, Shaanxi and Gansu initiated the pilot work of converting croplands to forests and pastures to grasslands. The pilot was extended to 224 counties in 20 provinces and autonomous regions in 2001. The year 2002 witnessed the all-round rolling-out of the project.

By 2005, the forested area had reached 17.342 million hectares, including 7.8345 million of converted croplands and 9.5075 million of forestation in barren mountains. With this project, the area with water and soil losses has reduced, with significant benefits to peasants.

In accordance with the plan, eight million hectares of forestation from croplands and 8.67 million of forestation in barren mountains will be achieved from 2006 to 2010. By 2010, the estimated water and soil loss area under control will be 22.667 million hectares and the sand-fixation area, 26.667 million hectares

with 260 million tons of less sand pouring into the Yellow River and the Yangtze River.

The treatment of wind and sand sources of Beijing and Tianjin

In order to improve the ecological environment of Beijing and Tianjin, the State Council approved the Beijing and Tianjin's Wind and Sand Source Treatment Project Plan on March 18, 2002, marking the full start of the project.

Beijing and Tianjin's Wind and Sand Source Treatment Project is a key program to build an ecological barrier for Beijing and Tianjin and an important step taken by China under the United Nations Convention to Combat Desertification. The project aims to improve the rate of forest cover, reduce the number of windy, dusty and sandstorm days, improve the ecological environment of Beijing and Tianjin and





Villagers of Shangdian Village, Liucun Town, Changping District, Beijing, plant trees even on windy and dusty days. Nanhetan Sands, Shangdian Village, is one of the key sections in the Project of Wind and Sand Source Area Control around Beijing and Tianjin. A photo taken in Mar. 2004.

halt desertification within 10 years by protecting existing vegetation, greening the hills, hands-on forestation, aerial seeding, converting cropland to forests, grassland treatment, and grazing bans.

From June 2006, an area of 2.1914 million more hectares than 2005 had been brought under forest cover. The project realized good results: an obvious increase in forest coverage rate, less desertification, development of the forestry industry, growth in ecotourism, improvement of peasants' living conditions, and an increase in plant production, forestry and migrant work in peasant incomes.