

Sectoral Five Year Plans of PRC Government Ministries

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These sections highlight the activities and targets of the five year plans of sectoral ministries, mostly for the period 2001-2005. Some longer term plans are also included.

Tenth Five Year Plan for Environment Protection (TFYP)

The objectives of the TFYP for environmental protection by 2005 are:

- try to ease the environment pollution situation
- slow down the degradation trends in the ecological environment
- improve environment quality in key cities and regions
- amplify environment protection policy, laws and regulation
- establish an administrative system suitable for the socialist market economic system

Efforts will focus on promoting pollution prevention work in the key regions identified in the 9th Five Year period, including

- three rivers (Huaihe, Haihe, Liaohe basins)
- three lakes (Tai Lake, Chao Lake, Dianchi Lake)
- two regions (acid rain control region and sulfur dioxide control region)
- one city (Beijing City)
- one sea (Bohai)

The Three Gorges Reservoir and upstream areas of the Yangtze River and Xiaolangdi Reservoir and upstream areas of Yellow River have been identified as the new key regions for the TFYP period. Also, the key cities for environment protection have been increased from 47 in the 9th Five Year Plan to 100 in the TFYP.

Planned tasks for ecological environment protection include:

- accelerating the formulation of the national ecological environment functional zoning system
- strengthening ecological environment protection in the western region
- setting up national ecological functional reserves
- establishing key supervision regions for resource development
- strengthening the construction of nature reserves and ecological demonstration regions
- strengthening the protection of biodiversity and bio-safety management

The short-term goals are

- establish 40-50 ecological protection areas of all kinds
- maintain a protected area network nationwide of 1,400 sites or 10 percent of the national surface area
- maintain 120 national ecological demonstration areas

- establish a 15 percent rate of restoring environmental destruction due to exploitation of mineral resources
- the eligibility rate of sewage disposal of intensive factories in important areas should reach 100 percent
- in areas where burning of straw is not allowed, more than 95 percent of straw should be appropriately dealt with instead of being burnt.

Budget requirements for identified land degradation control projects include:

- Protection area of the headwaters of the Yangtze River and the Yellow River:
 - Y150 million for infrastructure construction
 - Y15 million for management in the following 5 years
- Windbreak and sand-fixation protection area:
 - environment protection area around Heihe River, which includes water sources of Qilianshan Mountain, greenland of Hexi Corridor and windbreak and sand-fixation protection area of Alashan: Y100 million for infrastructure construction and Y10 million for management in the following 5 years
 - protection area of the lower reaches of Talimu River: Y60 million for infrastructure construction and Y5 million for management in the following 5 years
 - protection area of the north side of Yinshan Mountain and Kerxin. Y100 million for infrastructure construction and Y10 million for management in the following 5 years

The national total budget for ecological protection is Y5.712 billion during the Tenth-Five-Year Plan period. Among which Y4.775 billion is for capital construction, and Y0.973 billion is for management. The detailed items are:

- Construction and management of national protection area with ecological functioning: Y1.21 billion, of which Y0.1 billion is for management
- Construction and management of national nature preservation area and protection of species: Y0.962 billion, of which Y0.314 billion is for management
- Construction and management of ecological pilot area: Y1.37 billion, of which Y0.17 billion is for management
- Ecological protection pilot area focusing on important resource development: Y0.645 billion, of which Y0.5 billion is for management
- Ecological protection and sources control in rural areas: Y1.525 billion, of which Y0.308 billion is for management

Of all the funds above, Y3.877 billion will come from the national special project budget, Y0.3 billion will come from the national plan for observation and survey of environment, Y1.21 billion will come from local financing, and Y0.325 billion will come from departments concerned. At the same time according to the regulation of national input and local input in the ratio of 1 to 2, corresponding local inputs will amount to Y7.754 billion.

Tenth Five Year Forestry Development Plan

For forestry development planning purposes, four regions are distinguished in PRC:

- upper reaches of the Yangtze River and upper and middle reaches of the Yellow River
- desertified areas in north part of northwest PRC, north part of Huabei and west part of northeast PRC
- State-owned forests in northeast PRC and Inner Mongolia
- other areas

Ten important forest ecology and environmental construction programs are listed in the five year plan, including:

- Program for upper reaches of the Yangtze River and upper and middle reaches of the Yellow River. Areas include upper reaches of the Yangtze River beyond the Three Gorges area, and upper and middle reaches of the Yellow River to Xiaolangdi Reservoir, covering 13 provinces and 772 counties in total. The main activities planned are:
 - reforestation and planting grass from withdrawn farmland to restore vegetation
 - modifying utilization structure of natural forest resources
 - controlling soil and water erosion thoroughly to improve the ecological environment
 - establishing a sound ecosystem for the Western Development Strategy.

During 2001-2010, forestland of 18,410,000 ha has been designed - 8,590,000 ha for plantations, 3,340,000 ha for sealed mountains, 6,450,000 ha for aerial planting. During the 10th five year plan period, 9,060,000 ha forestland has been planned - 4,150,000 ha for plantation, 1,670,000 ha for sealed mountains and 3,240,000 ha for aerial planting.

- Program of Desertification Control. Fourteen provinces are involved in the program, including Beijing, Tianjin, Hebei, Inner Mongolia, Shanxi, Shaanxi, Liaoning, Heilongjiang, Shandong, Henan, Tibet, Gansu, Qinghai, and Xinjiang. The area comprises 2,760,000 km² of which 1,240,000 km² has been desertified, which accounts for 73.4 percent of the desertified areas in PRC. At present, 389,200 km² (31.5 percent) of these desertified areas will be controlled. The main actions of the program are:
 - finding efficient ways to conserve vegetation to prevent desertification in the regions
 - building up shelter belts along the edges of desert and Gobi
 - enlarging plantation areas by sealing desert edges and planting trees and grass
 - extending oasis areas

Targets: During 2001-2010, a total area of desert vegetation of 5,400,000 ha and plantation of 11,260,000 ha has been planned, of which 2,560,000 ha is for plantation, 7,350,000 ha is for sealed desert and planting grass, 1,350,000 ha is for planting grass by aerial seeding, and 75,000 ha is for breeding seedlings in the plan

period. During the plan period, 7 pivotal areas that impact seriously on Beijing will be brought under control as a first step.

Four types of desertification have been planned to be controlled:

- desertified grassland
- HunShanDaKe desert
- desertification in ecotone of farming and pasture
- forest for water and soil conservation in Yanshan Mountains and hills

No budget details were made available.

Tenth Five Year Plan on Ecological Agriculture (Ministry of Agriculture)

To improve the ecological environment and production conditions of agriculture, it is necessary to carry out a sustainable development strategy. Economic, social and ecological effects are taken as targets and science and technology as a guide. Based on natural and economic laws, engineering and biological measures in combination with agricultural measures are to be applied in any environment project. Soil erosion, grassland degradation, and farmland pollution are to be controlled for sustainable development of agriculture.

Through implementing key projects, 500,000 ha of farmland with high and stable yield output are to be established; 200,000 ha of agricultural products free of pollution are to be established; and 1.7 million households will conduct ecology demonstrations in their courtyards. The land area under ecological agriculture will cover 40 million ha, with 20 million ha where straw and stalk will be ploughed back into the arable land instead of being burned. All of these objectives are for mitigating a contradiction between rural energy and ecological protection, alleviating rural poverty, and controlling deteriorating ecological trends. No budget details were made available.

Construction Scheme of Agricultural Ecology in the Western Region of China, 2001-2010 (Ministry of Agriculture)

Based on Deng Xiaoping's theory to harness ecological environment in key areas, it is planned to stick to a combination of ecological construction and economy development, by undertaking both engineering and biological measures. More attention will be paid to prevention and protection. It is necessary to improve the basic condition for agricultural production, raise comprehensive capability of agricultural production in a bid to guarantee the normal development of local agricultural and industrial production and people's living, as well as to promote sustainable development of the national economy.

By 2005, the deteriorating trends on the agricultural ecological environment in the western region will be controlled preliminarily, whilst ecological agriculture will be improved in some areas. The supply of rural energy and farming conditions will be improved to a certain extent, and the income of local residents will be increased. By year 2010, the deteriorating situation of agricultural ecological environment in the western region will be controlled completely; ecological environment of agriculture in most areas will be improved. The supply of rural energy and farming condition will be improved preliminarily; the income of local residents will be raised to a large extent. No budget details were made available.

Tenth Five Year Plan for Water Resources Development in Pastoral Areas (Ministry of Water Resources)

The principle of reasonable allocation of water resources and water saving measures will be adhered to. As to water conservancy construction in pastoral areas, top priority will be given to potable water supplies for humans and livestock, strengthening water saving, appropriately developing the fodder base and artificial water saving irrigation on grasslands. In some areas, natural grassland irrigation and drainage could be considered. The primary planning targets are:

- to secure potable water for 4.67 million people and 35.06 million units of livestock, decreasing by 24 percent and 59 percent respectively
- to improve grasslands with inadequate water supply by 6.63 million ha and open up 4.01 million ha of grasslands with water shortage
- to build 5,350 new water supply works at village level and to provide tap water for 3.11 million people
- to add new irrigated areas by 0.3565 million ha, which will be 40 percent of existing irrigated area and accumulated area will be 65 percent
- to increase irrigation and drainage areas of grasslands to 0.5332 million ha, of which, 0.3422 million ha for fodder base irrigation, 0.1175 million ha for artificial grassland irrigation and 73,800 ha for natural grassland irrigation.
- Up to 2010, the accumulated grassland irrigation area will be 1.7609 million ha, calculated with present livestock amounts; each livestock will occupy 0.1 mu land (1 ha = 15 mu).

No budget details were made available.

Tenth Five Year Plan and Long-Term Plan (to the Year 2010) for Efficient Irrigation Development of China (Ministry of Water Resources)

Reform of irrigation systems into water saving forms is not only for satisfying development of agricultural production, but also for checking degradation of the environment. The development of efficient irrigation should focus on sprinkler irrigation; canal lining, piped water conveyance and techniques of irrigating crops using plastic film. During this plan period 20 irrigation systems in Tarim Basin and Ili Valley in Xinjiang and 6 irrigation systems in Hexi Corridor of Gansu will be established. It is planned to increase farmland areas with efficient irrigation by 15 million mu including 4 million mu by sprinkler irrigation, 1 million mu with water conveyance by piping, and 10 million mu with canal lining. The total investment is estimated to be Y5 billion.

Tenth Five Year Plan and Long-Term Plan (to the Year 2010) for Water Resources Development of China (Ministry of Water Resources)

Objective: water and soil conservation and ecological rehabilitation should be accelerated to improve the living and production conditions and reduce the sedimentation of rivers, lakes and reservoirs. Water pollution should be effectively controlled and prevented to protect water resources.

During the this plan period 250,000 km² of water and soil loss shall be preliminarily controlled, including 100,000 km² on the upper Yangtze River and 70,000 km² on the

upper and middle Yellow River. Some projects to prevent Beijing and Tianjin from sandstorms shall be constructed in the source areas. By the year 2010, an additional 250,000 km² area of water and soil losses shall be preliminarily controlled, including 100,000 km² in the Yangtze River basin and 60,000 km² in Yellow River basin. A national monitoring network for soil and water conservation shall be established and perfected to control the man-induced water and soil losses. Trends of degradation of water quality of rivers, lakes and reservoirs should be checked. Degradation of ecosystems in the areas where groundwater is seriously over exploited and of major rivers/lakes should be preliminarily checked. By the year 2010, water quality of the major sources of domestic water supplies shall be up to the national standards, and water quality of other water supplies shall basically satisfy the requirement of water users. Water quality of major rivers, lakes and reservoirs, over exploitation of groundwater, trend of water pollution and ecosystems/environment of rivers and lakes shall be preliminarily controlled and improved. No budget details were made available.

Tenth Five Year Plan and Long-Term Plan to the year 2010 for Irrigation Development of China (Ministry of Water Resources)

The plan acknowledges that most irrigation facilities are of poor quality, incomplete and badly maintained because most existing irrigation projects were constructed in the 1950s and 1960s when sufficient funds were not made available. Most projects have become outdated and can no longer be repaired. According to statistics 195 large irrigation systems and 21 percent of all canals, 30 percent of all structures are incomplete, and 60 percent – 80 percent of field works are imperfect. Effectively irrigated areas only account for 69 percent of the designed irrigated areas. Nearly 40 percent of key structures of the large irrigation systems are out of repair, and 20 percent of them have been abandoned. The irrigation techniques are backward and water use efficiency is low. Only 20 percent – 30 percent of irrigation canals are lined. The canal efficiency is only around 40 percent in the country on the average.

Guiding principles are:

- sustainable and harmonious population, resources, economy and environment development
- protecting and upgrading existing irrigation areas and moderate development of new irrigation areas
- applying both water source development and water saving measures, with water saving as first consideration
- adapting to agricultural and national economic development in the early 21st century

Tasks and objectives during this plan period include:

- improvement of 87 million mu of low-yield farmlands by water conservancy measures
- increase of effectively irrigated areas by 50.5 million mu (net increase by 30 million mu). Total area of effectively irrigated farmlands shall be up to 850 million mu by the year 2005
- increase of areas of irrigated forestlands by 2.5 million mu, up to 18.1 million mu in total by the year 2005
- increase of areas of irrigated orchards by 5 million mu, up to 29.6 million mu in total by the year 2005

- increase of areas of irrigated forage grass lands by 5 million mu, up to 19.05 million mu in total by the year 2005
- increase of areas of supplementary irrigation for dry lands by 27 million mu, up to 90.7 million mu in total by the year 2005

Long Term Plan of Water and Soil Conservation in Western Region (2001-2030) – Ministry of Water Resources

The primary goal is to insist on the principle of combing prevention/supervision and treatment/development, with large river basins acting as basis, tributaries as framework, counties as unit, small river basin as cell, and united programming of mountain, water, farmland, forest and roads. Comprehensive treatment and optimised configuration of engineering, plant and cultivation measures will be conducted. Water and soil conservation and exploitation and utilization of water and soil resources will be combined. Comprehensive prevention and treatment systems with multiple objectives and functions and huge benefits will be established, to realise unified economic, ecological and social benefits.

Short-term objectives are:

- about 20 percent of water and soil loss areas suitable for treatment in western region will be treated, with water and soil conservation work in key treatment zones done well with obvious results
- a prevention and supervision system and monitoring network on water and soil conservation will be established, while newly man-made water and soil loss is basically controlled and further degradation of ecological environment is effectively restricted.

The plan distinguishes four sub-regions:

- upper-and-middle reaches of Yellow River
- upper-and-middle reaches of Yangtze River
- Zhujiang River basin
- southwestern rivers/windy plain area

Construction targets include:

- upper-and-middle reaches of Yellow River: involving seven provinces (Qinghai, Gansu, Ningxia, Shaanxi, Shanxi, and Henan). The total land area is 0.7143 million km² and water and soil loss area is 0.4214 million km², accounting for 59 percent of total area. Loess plateau area will be the key point of treatment, from 2001 to 2030, and the area of water and soil loss treated will be 0.2644 million km² with 16,000 backbone works on water and soil conservation
- windy plain area: involving five provinces (Ningxia Hui Autonomous Region, Inner Mongolia, Qinghai, Tibet, and Gansu) with total land area of 3.7118 million km². At present, the area of water and soil loss suitable for treatment is 0.1719 million km², accounting for 4.6 percent of total area. The key points of treatment are valley areas of Talimu River, Chaidamu River, Shule River and Heihe River, from 2001 to 2030, the treated area of water and soil loss will be 66,300 km².

The plan will require an investment of Y292.36 billion for water and soil conservation and ecological environmental construction in western region, of which, Y153.364 billion is

from central sources, Y138.996 billion of local counterpart funds, and Y18.433 billion labor input from grassroots levels.

Provincial Land Degradation Control Plans

In addition to the national programs and plans, each affected province has drawn up its own plan to combat land degradation. Due to space limitations, only one provincial plan (Ningxia Hui Autonomous Region) is described in detail here.

Ningxia has an area of 5.18 million ha and a total population of 5.6 million people, of which 69 percent live in rural areas. The farmland area is 1.28 million ha, with mean area of 0.33 ha per capita (high by PRC standards). Forest land covers 540,000 ha, or 8.3 percent of the province. Mean annual rainfall varies between 50 and 550 mm (i.e. arid to semi-arid), with most rain between July to September. The desertified area in Ningxia is 3.39 million ha, or 65 percent of the province, comprising 22.1 percent slightly degraded, 44.5 percent moderately degraded, and 33.4 percent seriously degraded. Poverty incidence is almost 10 percent (530,000 people), with 90 percent of the poor living in degraded loess hilly areas.

Since 1949, the following achievements have been claimed

- 390,000 ha of wind eroded land controlled
- 510,000 ha of water eroded land controlled
- 62,000 ha of salinized land ameliorated
- forest cover increased from 1.4 percent to 8.3 percent
- 150,000 ha of grassland improved and 300,000 ha of perennial grasses sown
- 409,000 ha of base farmland established, with 195 reservoirs
- pumped irrigation systems on desert fringes used to establish 80,000 ha of oases

Targets set for 2010 include controlling damaging behavior, increasing forest cover to 12 percent, and achieving preliminary control of wind and water erosion. Areal targets are shown in Table 1.

Table 1 Targets of Desertification Control in Ningxia (2001-2030)

	2001-2010 ('000 ha)	2010-2030 ('000 ha)
Control of water erosion and soil loss	900	600
Control of wind erosion and shifting dunes	650	400
Afforestation	313	400
Grassland improvement	477	600
Terraced farmland	200	155
Conversion of marginal farmland	300	