

Annex I

A Summary on Implementation of the *Recommendations to the Chinese Government from the Fifth Meeting of CCICED Phase II* by the Relevant Ministries and Departments of State Council and Some Provinces, Autonomous Regions and Municipalities Directly under the Central Government

The recommendations to the Chinese Government from the fifth meeting of CCICED Phase II, held in October 2001 covered eight areas. Since February 2002, CCICED Secretariat has received feedbacks and reports in response to these recommendations from 16 ministries and departments of the State Council and their affiliated institutions, namely, State Development and Planning Commission (SDPC), State Economic and Trade Commission (SETC), Ministry of Science and Technology (MOST), Ministry of Finance (MOF), Ministry of Land Resources (MOLR), Ministry of Construction (MOC), Ministry of Transportation (MOT), Ministry of Water Resources (MOWR), Ministry of Agriculture (MOA), Ministry of Foreign Trade and Economic Cooperation (MOFTEC), State Environmental Protection Administration (SEPA), State Forestry Administration (SFA), Chinese Academy of Sciences (CAS), State Meteorological Administration (SMA), State Oceanic Administration (SOA) and State Power Corporation), and 15 provinces, autonomous regions and municipalities directly under the Central government, namely, Beijing, Tianjin, Hebei, Inner Mongolia, Liaoning, Shanghai, Jiangsu, Jiangxi, Shandong, Hainan, Chongqing, Guizhou, Tibet Autonomous Region, Shaanxi and Qinghai. These feedbacks and reports will be summarized in the following eight areas.

1. Environmental Economics

The State Development Planning Commission (SDPC) is collecting comments from related institutions and local governments on the draft notification for implementing the Standards for Collecting Pollution Levies as well as on the proposed standards and methods of calculation of pollution levies. These documents were formulated in accordance with the relevant provisions in the *Regulation Concerning Collection and Use of Pollution Levies*, which have been endorsed in principle by the State Council. In preparing these documents, SDPC collaborated with MOF, SEPA and SETC. All these documents will be presented to the State Council for approval after they are further improved and finalized. SDPC is also organizing studies on some economic policies for collecting fees for desulfurization, treatment of municipal wastewater and disposal of municipal wastes. In cooperation with MOF, MOC, MOWR and SEPA, SDPC has issued a *Notification for Collecting Fees for Disposal of Municipal Wastes and Promoting Industrialization of Waste Disposal*, and a *Notification for Further Reforming Water Prices in Cities*.

The Ministry of Finance (MOF) has formulated the *Regulations Concerning Use of Pollution Levies* (to be promulgated) in consultation with relevant departments of the State Council. MOF is working on the rules to implement this regulation, such as *Rules for Use and Management of Pollution Levies*, *Rules for Tax Exemption from Pollution Levies as well as Standard for Collecting Pollution Levies*. MOF has allocated funds for

strengthening environmental enforcement in Western China, which will be used to improve enforcement equipment and efficiency in that region. MOF plans to increase environmental expenditure in the public fiscal budget year by year. In collaboration with SEPA, MOF is reforming the use of pollution levies, with a view to increase funds for capacity building for environmental monitoring at the national level. MOF is also working with SEPA on the taxation policy for environmental treatment.

The Ministry of Construction (MOC), together with SDPC, MOWR and SEPA, has issued the *Notification for Further Reforming Water Prices in Cities*. MOC is organizing studies on the methods for collecting fees for treatment of municipal wastewater and disposal of municipal wastes. In addition, together with SDPC, MOF and SEPA, MOC issued the *Notification for Collecting Fees for Disposal of Municipal Wastes and Promoting its Commercialization*.

The Ministry of Water Resources (MOWR) is of the view that the overall concepts of the recommendations are of high value for enhancing water resources management in China.

In formulating its policies, the Ministry of Foreign Trade and Economic Cooperation has taken full account of their impacts on environment. A mechanism of assessment of key commodities has been established to minimize their impacts on environment. The companies engaged in international trade are encouraged to protect endangered and rare species. To this end, necessary financial resources are provided to farming and breeding of these specie. Financial resources are also mobilized through international markets to those small and medium-sized enterprises that have been accredited with EMS.

The State Oceanic Administration (SOA) has reformed the rules for collecting fees for waste dumping in seas and oceans, through improving the provisions in the *Law of Marine Environmental Protection*. SOA has also strengthened the capacity of executive law enforcement and the efforts to supervise law enforcement.

Tianjin has undertaken an assessment of environmental benefits of urban gardens and forest, and established models and methods of calculation for assessing and analyzing ecological/environmental benefits of urban greened areas. Tianjin has also studied how to reform the rule of pollution levies. Further efforts are made to establish and improve the mechanism for decision-making for integrating environment with development, and to explore the operational models, technical specifications and operational methods for undertaking environmental impact assessments on major economic development policies and plans. Strategic environmental assessments will be gradually promoted. Strict approval procedures have been adopted for those projects that do not comply with the national industrial development policy and do not fit in the overall municipal master planning. A rule of environmental veto has been adopted in approving those projects. Tianjin is disseminating the *Notification for Establishing National Environmental Model Cities* with the aim to turn the city into such a model, through implementing the strategy of sustainable development and strengthening environmental protection and ecological conservation.

Hebei Province has incorporated sustainable development into its tenth five-year plan for social and economic development as well as its tenth five-year plan for environmental protection and ecological conservation. The province has been making persistent efforts to integrate environmental protection with economic development. Environmental education is provided to the departments at all levels in order to raise and strengthen their awareness of environment and sustainable development. The environmental performance examination is undertaken annually in 11 cities and all counties in the province to make sure that all the environmental targets are fulfilled. In addition, this constitutes an important part in evaluating the performance of administrative and party officials. In Hebei Province, a steering group for environmental protection has been established to take charge of the environmental performance examination, coordinate among departments, supervise the implementation of environmental targets, propose major environment-related decisions and policies and address major issues and policies in the field of environment and economy. Thus, a mechanism for decision making to integrate environment with economic development has basically been established in this province.

Inner Mongolia is of the view that the economic policies of the governments at all levels should be established on the basis of their own environmental plans and programmes.

Liaoning Province has incorporated sustainable development into its 10th five-year plan for social and economic development and its 14 sub-programmes. The province has also formulated its 10th five-year-plan for environmental technology and industry development as well as its 10th five-year-plan for environmental science and technology development, with a view to increase scientific and technological investment in the environment. The province is organizing activities in the field of cleaner production and the studies on technologies for desulfurization, denitrification and safe disposal of hazardous wastes. Great efforts are being made in the development of environmental industry. Since March 1, 2002, fees for wastewater treatment has been raise in the province and the policy is being formulated for collecting fees for disposing of municipal wastes.

Shanghai has adopted a three-year action plan for environment for 2003-2005. Incentives and other policies have been used to encourage cleaner production and consumption behaviors favorable to the environment. A proper adjustment has been made to the standard and scope of collecting fees for pollutant discharging in order to control the total amount of pollutants. The municipality has been increasing its investment in the environment, making sure that its total environmental investment will exceed 3% of its GDP. Meanwhile, the environment management of its relevant government departments is upgraded by establishing a new and effective system for environmental protection and management.

Jiangxi Province has incorporated sustainable development into its 10th five-year-plan for social and economic development. In addition, the province has adopted its own five-year plan for environmental protection.

Hainan Province is strengthening its environmental legislation and making sure that a democratic process is followed to formulate environment-related policies. The private sector and individuals are encouraged to participate in environment management. Non-governmental environmental organizations and consulting institutions are also encouraged.

Chongqing has begun to collect fees for mineral resources development compensation, wastewater discharging and treatment, sulfur dioxide emission and disposal of municipal wastes. The policy of gradual implementation is adopted to make sure that the actual environmental costs are eventually internalized in the various pricing systems. Full consideration is given to the environment in the process of formulating the municipal master plan, land-use plan, migration and relocation plan, readjusting the municipal industrial structure and productivity layout, reforming road-use tariff, pricing land-use and land-rental. Some regional environmental impact assessments have been made in the municipality. The environmental performance examination is conducted to those heads of party and governments at the district and county levels. A responsibility system is adopted for the implementation of environmental targets by various departments within the municipality. Rewards and penalties are put in place according to their environmental performance.

Guizhou Province has incorporated sustainable development into its strategic plan for sustainable development, which is a part of its 10th five-year-plan for social and economic development. The province has also adopted its 10th five-year plan for environmental protection. The mechanism to integrate environment with economic development has been established in the province. Environmental impact assessment is undertaken to those proposed development zones and projects. A rule is being gradually established for coordination among environmental departments and examining their performance. A system has been established for monitoring and managing development activities in the important ecological functioning areas and resources development zones. The province has adopted a responsibility system for achieving environmental targets. The improvement of environmental quality has been included as an important agenda of the governments at all levels and a part of the examination of their performance. The province has also drafted provisional regulations concerning administrative penalties for violating environmental regulations. Gradual efforts are made to strengthen the environmental awareness and education.

Tibet Autonomous Region will establish a mechanism for integrating environmental and economic policies and decisions. Environmental impact assessments are to be undertaken on its economic plans and programmes as well as development plans for some regions, river basins and agricultural development, with a view to considering fully the environmental factors in the early stage of policy development.

Shaanxi Province is organizing the implementation of its 10th five-year plan for environmental protection. The province has also formulated the *Plan for Pollution Prevention and Control in Wei River Basin*, the *Plan for Environmental Protection of Key Energy and Chemical Industry Bases in Yulin*, the *Plan for Pollution Prevention and*

Control in Handanjiang River and the Programme for Qingling Ecological Function Areas. In addition, the province has formulated its *Programme for Mineral Resources Development* as well as its *Programme for Preventing Geological Disasters*. The province has issued and is implementing the *Regulation Concerning Geological Environmental Management*. A responsibility system is adopted to hold administrative heads of each administrative unit responsible for the environmental quality within their administration. A mechanism has been adopted for integrated decision making in the field of environment and economy. The improvement of environmental quality has been selected as an indicator to examine the political and administrative performance of the government heads and the officials in charge of environmental protection. The responsibilities of each related department are further defined to make sure that those responsible for major environmental accidents will be held accountable. A mechanism for administrative monitoring and supervision is established for this purpose. Environmental education is organized for all the departments at the provincial levels. Efforts are also made to increase the environmental awareness and the sense of responsibility for environment of the public.

Qinghai Province has incorporated ecological conservation as part of its medium and long-term plans for social and economic development as well as its annual plan for implementing the medium and long-term plans. The governments at all levels are required to include investment in ecological conservation in their budgets. Constant efforts are made to coordinate among various departments in terms of their environmental policies and regulations. Meanwhile, the environmental regulations and administrative rules for environmental protection are constantly improved and the law enforcement is strengthened through strengthening the enforcement institutions and their capacities.

2 Sustainable Agriculture

In connection with agricultural restructuring, State Development and Planning Commission has allocated special funding in its infrastructure investment plan to support the establishment of some base farms for the production of non-GMO food .

State Economic and Trade Commission, together with seven other ministries and departments, has issued the Proposal for Further Improving “Trio Green Projects”, which are intended to establish green food markets, promote environmentally sound consumption and establish corridors for environmentally friendly products. Quality control in the entire process from fields to dinner tables is practiced. This is done in order to adjust agricultural structure and increase the income of farmers as well as agricultural outputs. SETC has also issued the Proposal for Further Implementing Pilot Projects for Establishing “Green Corridors”, in collaboration with seven other departments. In this proposal, emphasis is given to improving the transportation of fresh and perishable food and increasing facilities to keep food fresh. Inter-module transportation model is use and various forms of systems are established for food delivery and deployment. It is also proposed that a source monitoring system will be established or improved for transportation of fresh and perishable food to ensure the high quality of food transportation.

Ministry of Science and Technology has organized and implemented eco-farming technological research activities and demonstration projects, which are a part of national programme for science and technology development. Efforts are made to explore a model of sustainable agricultural development in China through technological integration and demonstration.

Ministry of Finance has provided funding to MOA to support its efforts in revising some laws, such as the *Law of Agriculture*, *Law of Grasslands* and the *Regulations Concerning Fertilizer Management*, as well as its activities to publicize these laws and monitor their enforcement. MOF continues its efforts in collaboration with relevant departments to address the problems with production and sales of agricultural chemicals and fertilizers. Specialized funds are arranged to continue support of agricultural infrastructure construction, environmental/ecological conservation of grasslands, promotion of agricultural technologies, training of farmers, agricultural restructuring, quality assurance of agricultural products and related services system establishment. All these are intended to improve the agricultural infrastructure, ecology and environment, upgrade the competitiveness of agricultural products, promote scientific and technological progress in agriculture and increase the income of farmers.

Ministry of Land Resources has allocated funding to support a survey of geological environment for eco-farming in Zhejiang Province. It has also organized a national workshop on agricultural land-use in 2002, which is aimed at exploring how to integrate agricultural geological research with social and economic development and how it will contribute to socially and economically sustainable development. Exchange of relevant information was undertaken through this workshop.

Ministry of Agriculture has initiated an important research project on eco-farming technological system and demonstration projects. Research activities were also organized on some key technical issues, such as controlling pollution from use of agricultural chemicals and fertilizers, reasonable use of agricultural wastes, agricultural environment protection and monitoring of quality and safety of agricultural products. As a result of project implementation, the eco-farming technological system has been improved. Eight demonstration zones for eco-farming and industrialization and two run-off pollution control demonstration zones have been established in order to create new operational mechanisms for eco-farming industry. MOA has also initiated the *Action Plan for Green Food*.

MOFTEC worked with relevant departments of the State Council to address some pressing issues, such as excessive residues of agricultural chemicals in agricultural products, food security and genetically modified food. Some success has been achieved in managing and controlling the problems above.

Chinese Academy of Science has established an important research project, which is entitled “nitrogen, phosphorous and potassium management in major agricultural ecosystems in China”. This research project approaches the policy issues in the field of

production, circulation and use of fertilizers, with adequate attention given to the circulation process and environmental impacts of the nutrients in agricultural fields. The project provides technical support to increasing the efficiency of the use of agricultural chemicals, lowering production costs and reducing pollution from run-offs.

SOA has intensified the monitoring and warning of disasters resulting from red tides through undertaking the monitoring of red tides in all marine areas and predicting the conditions and environmental elements for possible occurrence of red tides. Ten red tide monitoring zones have been established in the key mariculture areas to ensure sustainable agricultural development in the marine and coastal regions.

Tianjin continues to readjust its agricultural structure, through vigorously developing eco-farming. Tianjin continues to implement its regulation for protecting agricultural environment. Great efforts are made to develop water-conservation agriculture, green agricultural products, use rationally agricultural chemicals and reduce pollution from run-offs. The agriculture and environment departments of Tianjin plan to promote jointly the development of organic food industry. The use of agricultural chemicals and highly poisonous chemicals is reduced in the seedling nurseries and production of fresh flowers and other gardening products. Comprehensive efforts are made to prevent and control pollution from animals' manures and increase the comprehensive use of these manures. The system for monitoring agricultural environment and ecology has been further improved.

Liaoning Province has established five province-level pilot projects for eco-farming in five counties. It has also started the implementation of its action plan for development of green food, with a view to promote sound and orderly development of green food. The province has established a Steering Group for Biosafety Management of Agricultural Genetic Engineering to strengthen the management in this area. The province is also promoting technologies for producing green food such as biological control of pests. Meanwhile Liaoning has formulated the local standard and technical specifications for controlling pests and ensuring vegetable safety. A list of highly poisonous chemicals has been proposed for ban in the province.

Shanghai is increasing the environmental awareness of farmers through strengthening publicity and education. The municipality continues promoting the application of agricultural standards. A census was made on the soil and environmental quality of the main food production areas within the municipality. In this process, great attention is paid to monitoring of product quality and the application of technical specifications in the production processes. The use of agricultural chemicals and fertilizers is reduced and instead the use of those agricultural chemicals with high effectiveness, low poison and low residual leftovers are being promoted. The municipality is actively promoting the production of safe, healthy and high-quality agricultural products and green food, as well as proper development of organic food.

Jiangxi Province has incorporated eco-agricultural development into its 10th five-year plan for social and economic development. They focus efforts on a number of pilot

projects in this field in several countries. Meanwhile they are taking active measures to promote eco-farming. They are promoting agricultural technologies, practical biotechnologies, water conservation and irrigation techniques and organic/eco-farming technologies, through demonstration projects in the field of eco-farming in some zones designated for agricultural science and technology development.

Hainan Province is trying to regulate and standardize the development of environmental-friendly agriculture. The province has formulated and issued eight local standards in this field, such as the Standard for Environmental Quality of Environmentally Sound Vegetables and Fruits Production Bases and the Environmental Quality Standard for such products. In addition, the province has also formulated and issued four local regulations for this purpose, such as the *Regulations Concerning Management of Environmentally Friendly Vegetables and Fruits*. In implementing the projects designed to control chemical residues and protect soil fertility, an overall ban is adopted for the use of highly poisonous and high residual agricultural chemicals in the production of vegetables and fruits. A group of alternatives have been recommended for replacing these agricultural chemicals. In sum, all these are implemented to build more ecologically sound communities for the well-being of people.

Chongqing has proposed four major strategies aimed to increase agricultural efficiency, namely, revitalizing agriculture with science and technology, adopting various forms and scales of development, promoting agricultural development through proper township development and sustainable development. Key efforts are made in the development of green food and the industries with particular local characteristics. A new agricultural structure is being established, which is characterized by high quality, high output and low consumption. Meanwhile the plantation structure is also optimized. Great efforts are made to enhance the industrialization of agriculture. A preliminary system of monitoring of agricultural environment has been established and will be further improved during the tenth five-year plan period.

Guizhou Province has established ecological demonstration zones and eco-farming as ways to promote agricultural sustainable development. 55 projects in 31 counties of the province have been included in the national programme for integrated agricultural development. The fuel wood forest is grown to address rural energy issues. Concentrated animal farms are developed at the regional level. The pollution has been effectively controlled from the use of agricultural chemicals, fertilizers and membranes. Great efforts are made to promote the scientific use of fertilizers, use of biological fertilizers, low or no poison chemicals and the biological methods and techniques to prevent and control pests. The awareness of the public, particularly farmers, of the agricultural management and consequent environmental impacts is gradually increased.

Tibet Autonomous Region has adopted promoting progress in agricultural sciences and technologies as the guiding principle for agricultural development.

Shaanxi Province has divided land-use into four categories: protected land-use area, land restoration area, sustainable land-use area and intensive land-use area. The research and

development activities undertaken in this field focus on key and major issues such as preventing soil erosion and increasing water-use efficiency in the Loess Plateau. A ban is adopted for claiming lakes for agricultural use or encroaching river beaches and marshland. A plan is being implemented to return to forest, grassland and lake those land areas that have been excessively exploited and affected local ecology. The province plans to set up a new system to predict and warn natural disasters.

3 Forest and Grassland

The State Development and Planning Commission, as a leading agency for a joint ministerial committee for national environment protection and ecology conservation, worked with other departments and proposed a basic framework concept of “*streamlining and integrating relevant projects, strengthening coordination, decentralization and strengthening supervision*”. The joint ministerial meeting served as the mechanism for coordinating key priority projects in the annual plan of each respective department, and making sure that local governments and other stakeholders actively participate in and are responsible for the investment and management of projects for environment protection and ecological conservation .

The Ministry of Finance, in collaboration with the State Forestry Administration, conducted a research project on “Investment and Cost and Benefit Analysis of Forestry”, which was a comprehensive and in-depth study on the costs and benefits of various types of investment of varying scales and characteristics on forest industry, including natural forest conservation and returning farmland to forest. This important study provides valuable information for fiscal policies on forestry and for establishing a forest investment mechanism that meet the needs of socialist market economy. A special funding was earmarked for the monitoring and evaluation of environmentally friendly food, agricultural resources, forest industry, wetland, rare and endangered plant species and desertification.

The Ministry of Water Resources is working on a *Plan on Ecological Conservation by Replacing Fuels with Small Hydro Power Plants*. The plan aims to develop a number of small hydro power projects in reclaimed farming areas, nature conservation zones, natural forest conservation areas and major areas with serious soil erosion problems. These non-commercial projects will replace the use of traditional fuel to promote public well-being and will complement other matching efforts in reclaiming farmland to forest and closing the mountains for forest conservation.

The State Environmental Protection Administration and the State Tourism Administration jointly convened a meeting on Tourism and Ecological Conservation to strengthen environment protection and ecological conservation in tourism. SEPA has also started, in collaboration with Ministry of Land Resources, State Statistics Bureau and surveying and mapping departments, a study on the present status of ecology and environment in the middle and eastern parts of China and on the division of different ecological functional zones in western China.

The State Forestry Administration worked out a standard for classifying the economic forest and the ecological forest to serve the purpose of returning arable land to forest land-use, the *Technical Guides for Design and Operation of Reclamation Projects at County Level*, the *Regulations on Management of Seedlings for Reclamation Projects*, and *Regulations on Examination and Acceptance of Reclamation Projects*. It has organized evaluation of reclamation projects from ecological, economic and social perspectives. It has started the implementation of “Six Major Projects” – six major forest projects as pilot projects and is working out an overall plan for integrated monitoring of forest resources and ecological environment. The studies on banning logging of natural forests are also under way.

The State Meteorological Administration of China has used its technological advantages to provide data for reclamation projects, such as remote sensing, GIS and GPS.

Tianjin has approved *The Plan for Conservation of Eco-sphere around Tianjin*, which is a blueprint for ecological conservation in the 3100 square kilometers of areas around Tianjin. It aims to build the city and its adjacent areas into an ecosystem suitable for the sustainable development of the city. Tianjin has also conducted overall cost-and-benefit analysis for reclamation and natural forest conservation projects, and is developing a method for their long-term monitoring and evaluation. It has adopted appropriate technologies to maximize their ecological benefits and economic returns. It has conducted follow-up studies on the effectiveness of current logging ban, and adjusted the banning areas according to the findings. Tianjin has also strengthened the protection of wetland as well as of the shell dams within the planned conservation zones through identification of special ecological zones along its coastal areas.

Following the *Suggestions of the State Council on Further Improving Policies and Measures for Returning Farmland to Forest*, Hebei Province has worked out its own province-specific plans and corresponding measures to ensure reclamation of farmland to forests. It has developed local forest resources monitoring systems and strengthened monitoring of land degradation and desertification.

Liaoning Province has worked out its tenth five-year plan for economic and social development, which includes developing five shelter forests, four commercial forests, and seven projects for county-level ecological and environmental conservation. The plan also includes sections on reclamation projects, identifying 13 cities and 49 counties/districts as major target areas. Logging of natural forests will be banned in 8 cities and 34 counties, with subsidies and management measures provided for natural forests and man-made forest. Forest monitoring systems are being developed and administered. The province has started experimenting with registration of forest ownership in Liaoyang and will extend the practice to the province in general.

Inner Mongolia Autonomous Region has stepped up its investment in ecological and environmental conservation. It is implementing projects in 8 major areas: conservation of natural forest, shelter-forest development in the “three north” area (the northwest, the northeast, and north China), eco-conservation of the grassland, reclamation of farmland

to forest and grassland, integration of eco-conservation and environmental protection, prevention and control of desertification, green passageways and water and soil conservation. In addition, 5 key regional projects and a series of eco-conservation are under way.

Shanghai is implementing its integrated greening project for the urban and suburban areas, which aims to improve the environmental benefits of existing green spaces in the city and improve eco-environment on the outskirts of the city. It has established an indicator system for long-term monitoring and evaluation of forest in the city. Priority is given to forest coverage and biodiversity conservation, water and soil conservation and integrated management, production capacity, health and vitality of forest eco-systems, and maintenance of the contribution of forest to global carbon circulation.

Jiangxi Province continues its efforts in closing the mountain for afforestation, reclaiming farmland to forest, conservation of natural broad-leaf forests and reformation of man-made coniferous forest. It has speeded up its development of shelter forest in the Boyang Lake basin, along Yangtze River and the section of Pearl River within Jiangxi. All sloped land with more than 25 degrees will be returned to forest and grassland, and those less than 25 degrees will be gradually reformed to high-standard terraces. In implementing reclamation projects, those who returned the farmland will be responsible for afforestation and those who operate the management of the forest will reap the benefit. The ownership of forests will be identified by issuing an ownership certificate to the forest operators to protect their interest. The Province has formulated the *Provisional Regulation on Protection and Management of Key State Shelter-belts and Forest for Special Purposes*, banning logging in these forests and building a monitoring system for their protection.

Hainan Province has strengthened conservation of natural forest and implemented reclamation of farmland to forest projects. It has developed a plan for reclamation projects and for natural forest conservation, established and continues to improve its forest resources monitoring and evaluation systems.

In accordance with its *Regulations on Conservation and Management of Forest Resources in Natural Forest Conservation Projects*, Chongqing has adopted a responsibility system for forest resource management, and has experimented with overall cost and benefit analysis for reclamation and natural forest conservation projects.

Guizhou Province has implemented a series of projects aimed at ecological conservation. It has actively carried out reclamation and natural forest conservation projects and has made overall cost and benefit analysis in the implementation process, taking into consideration the ecological, social and economic costs and benefits at different levels.

The Tibet Autonomous Region has strengthened the conservation of forest and grassland. It has adopted effective measures to conserve natural forests by closing the mountains for afforestation, growing more trees, reclaiming farmland to forest, and developing cash crop forest and fuel forests. It has developed measures to reclaim farmland to grassland,

improve existing grasslands, and control desertification, salinization and soil degradation. It has also identified farming-forbidden areas, grazing-forbidden areas, grazing-forbidden periods and grazing-rotation areas.

Qinghai Province has controlled the grazing load so as to conserve natural grassland. With the practice of signing individual contracts, the effort to reclaiming farmland to forest is carried out at household level with each household responsible for certain piece of forest and grassland. High-efficiency man-made grasslands have been developed to better serve the needs of animal husbandry while conserving eco-environment. It has also stepped up efforts in monitoring and protecting existing vegetation and forests, ensuring that practical steps are taken to close the mountains for afforestation and that projects for reclamation of farmland to forest and grassland are a success.

4 Biodiversity

MOST, jointly with SEPA and CAS, has initiated the National Programme for Ecosystem Assessment and Research, and participated in relevant work in the Millennium Ecosystem Assessment. Priority is given to evaluation of eco-systems in western China.

Following the strategy of sustainable development and the principle of “conservation in the process of development and development in the process of conservation”, MLR has approved the establishment of 44 national geological parks. Progress has also been made in establishing nature reserves with special geological features. The State Council has approved the establishment of a number of national-level geological heritage reserves, including Nihewan.

MOA has taken the lead in drafting *Regulation on Protecting Wild Plants* and has built up a national germplasm bank, one duplicate germplasm bank and 32 perennial and asexual propagation crop germplasm nursery. Expert panels have been organized to carry out studies on the evaluation, utilization of current germplasm resources in stock and other basic research projects. Basic survey and research have started on the compilation of *List of Key State-Protected Wild Plants (Agricultural Section)* and *Action Plan for Key State-protected Wild Plants*, which will serve as the guideline for the protection, management and reasonable utilization of wild agricultural resources in the country. A special project on protecting wild plants has been started and pilot projects on protecting wild beans, wild rice and close relatives of wheat have been experimented in Yunnan and other provinces. These demonstration projects for protection of natural habitat are aimed for better protection of wild species.

The State Forestry Administration has worked out *National Plan for Protection of Wild Flora and Fauna and Their Habitats 2000-2050* as a guideline for biodiversity and natural eco-system protection. Its short-term goal is to build up an institutional framework for wildlife conservation and administration at the central and provincial government level. The mid-term goal is to strengthen capacity building in the administrative department at central, provincial and regional and municipal level, build up a network for wildlife protection and management, including investigation, statistics,

monitoring and implementation, and improve scientific research and import and export mechanism. The long-term goal is to legalize and standardize wildlife protection and management and bring scientific research on wildlife to a new level so as to ensure a sound cycle of wildlife resources. Another goal is to establish a comprehensive legal, policy and monitoring system for wetland protection, management and reasonable utilization.

The Chinese Academy of Science, in cooperation with UNEP and other international organizations, has made significant progress in the implementation of the project on the Eco-system Assessment in western China. A large amount of work has been done on biodiversity protection, sustainable use and the construction of a support platform. It has undertaken a number of projects entitled “The Changes in Biodiversity in Yangtze River Basin, Its Sustainable Utilization and Regional Eco-safety” (one of key state-sponsored fundamental research projects), “Conservation of Biodiversity in Key Regions in China and Annals of Flora in China”, “Annals of Fauna in China and Annals of Cryptogams in China” (key projects supported by National Natural Sciences Foundation), and “Research and Demonstration on Key Technology in Desertification Management and Sandstorm Prevention and Control around Beijing” (a key state project for science and technology development). It has invested 200 million RMB in a network of eco-system research in China, greatly strengthening its capacity in monitoring, research, demonstration and information retrieval.

The State Ocean Administration has strengthened protection of marine nature reserves and special conservation zones. It has established a number of new marine nature reserves in the coastal regions of China, the first marine special conservation zone in Ningde, Fujian Province, two marine eco-monitoring stations in Changli, Hebei Province in the north and Weizhou Island, Guangxi Autonomous Region in the south. It has started a survey on the typical off-shore marine ecosystems in China which will improve understanding of their current status.

Tianjin has collaborated with relevant departments to protect the nature reserves and restore damaged natural resources. It has made efforts to conserve natural ecosystems and natural vegetation in the parks and gardens in the urban areas, experimented with growing a variety of plant groups in gardening, and done its utmost to conserve water resources. It has compiled a Guide to Application and Protection of Biodiversity in Parks in Tianjin, and has acted strictly in compliance with the Biodiversity Convention. It has studied the negative impact of invasive plant species and its degree of damage to endemic plant species, evaluated the biosafety of GMOs and imported plant species, compiled a list of wildlife resources in Tianjin. It has strictly implemented regulations on quarantine of plants so as to prevent the invasion of alien pests.

Liaoning Province has incorporated biodiversity protection into its 10th Five-year-plan for economic and social development. By implementing the *Development Plan for Nature Reserves in Liaoning* and *Notice on Strengthening Wildlife Conservation*, it has strengthened wildlife management and protection of nature reserves. By the end of 2000, there are 60 nature reserves in Liaoning, making up 9.7% of total land areas in the

province and forming a network of nature reserves. It has also compiled a *List of Protected Wild Flora in Liaoning*.

Inner Mongolia Autonomous Region has strengthened its conservation of nature reserves. It has developed a local standard, specifying *The Requirements on The Environmental Quality of the Production Site of Environmental-friendly Agricultural and Husbandry Products*. A new *Regulation on The Management of the Production Site of Environmental-friendly Agricultural and Husbandry Products* will be issued soon.

Jiangxi Province has made efforts to rescue some ecologically vulnerable zones in the entire Boyang Lake region and the upper reaches of the five major rivers. It has built the Boyang Lake National Eco-conservation Zone and provincial eco-conservation zones in the source of Dongjiang River, Ganjiang River and Xiannu Lake. Emphasis has also been given to the breeding of rare and endangered species. The *Guideline for Conservation of Boyang Lake National Eco-conservation Zone* has been developed.

Hainan Province has developed the *Master Plan for Conservation of Wildlife and Nature Reserves in Hainan* to step up efforts in biodiversity conservation. Emphasis has been given to eco-conservation in the middle part of the province by carrying out poverty-relief projects in the mountainous regions in the middle of the province, guiding various institutions, including some companies, to give funding support to local residents to develop the economy. By developing a series of plans on eco-conservation, including the *Guidelines for Building Hainan into an Eco-province*, the *10th five-year-plan and the Long-term Plan for 2015 on Environmental Protection in Hainan*, and the *10th five-year-plan and the Long-term Plan for 2015 on Eco-conservation in Hainan*, the province has incorporated environmental protection and ecological conservation into the 10th five-year-plan for economic and social development in Hainan. A study on strategies for sustainable development has been carried out. The province has established a joint committee on building an eco-province and an office for this purpose. An annual work scheme on building Hainan into an eco-province has been developed. It has a number of pilot cities and counties serving as example of ecological soundness. It has encouraged the development of eco-industry, strengthened eco-environment conservation, strictly controlled pollution sources, and promoted some exemplary eco-villages. The various departments and functions of the provincial governments are doing their own parts in building Hainan into an eco-province.

Chongqing City has formulated *Regulations on the Management of Nature Reserves in Chongqing*, bringing nature conservation into a legal framework. It has established a steering group on eco-environment conservation, a municipal committee on environmental protection and an evaluation and review panel on nature reserves. These organizations are responsible for coordinating relevant issues related to eco-system conservation and restoration.

Guizhou Province has protected biodiversity by establishing nature reserves. Currently there are 79 nature reserves and 53 scenic areas.

Tibet Autonomous regions has developed *Division of Eco-functional Zones and Plan for Conservation of Eco-functions*, establishing conservation zones for various types of biodiversity resources that need to be protected. This is the basis for overall eco-environment protection. It has issued *On the Implementation of Regulation of People's Republic of China on Nature Reserves in Tibet Autonomous Region*.

Shaanxi Province has made efforts to rescue the eco-environment in the Qinling Mountain National Eco-conservation Zone. It has made it compulsory to conserve eco-environment in the key resource development areas, encouraged eco-environment protection in ecologically sound regions, and built in a creative manner some demonstration eco-zones at the municipal, county, district and village levels. It has promoted the development of eco-agriculture, green industry and organic food.

Qinghai Province has completed division of its eco-functional zoning and is carrying out dynamic monitoring of the eco-systems while improving its monitoring and management institutions. It is building a number of nature reserves typical of their eco-systems, working out specific measures to protect rare and endangered wildlife, and developing an eco-environmental quality indicator system to better protect biodiversity. The regulation on the use of herbal plants as medicine has been developed and is being implemented.

5 Cleaner Production and Pollution Control

The State Economic and Trade Commission has issued the 10th five-year-plan for 14 industries including machinery, automobiles, metallurgy, non-ferrous metal, petroleum, petrochemical industry, chemical industry, medicine, coal, building materials, light industry, textile, power and gold, as well as the Guideline for Planned Industrial Restructure in the 10th Five-year-plan Period. With the approval of State Council, it has made the third List of Industries to be Phased Out, which will eliminate backward production capacity, technology and products. It continues to promote cleaner production demonstration projects. It has initiated drafting of *Rules for Accrediting Cleaner Production*, *List of Future Cleaner Production Technologies in Key Industries*, and *List of Products and Packages for Compulsory Recycling*. With the implementation of *Voluntary Action Plan for Cleaner production*, enterprises and industries are encouraged to carry out cleaner production. In accordance with SETC recommendation on the use of tax mechanism (reductions and exemptions), MOF and State Tax Administration have jointly issued *Notice on Policy Issues concerning the Value-added Tax for the Comprehensive Utilization of Certain Resources and other Products*, giving VAD refund to some products which are the result of comprehensive utilization or recycling of certain resources, and preferential tax rate (half the collectible VAD) to power generation using gangue, peat, shale oil and wind as well as some new wall material.

The Ministry of Science and Technology has selected metallurgy, chemical industry and light industry as major targets for promoting cleaner production. With its support to research and development in original technical process and technology and demonstration projects, pollution emission has been reduced and the approach has changed from end-of-

pipe treatment to prevention and control at the source. The investment in environmental research has increased tremendously; it is estimated that input in environmental research in the 10th five-year-plan will increase by 5 times in comparison with that in the 9th five-year-plan. The funding will be used to support a number of pollution prevention and control projects and basic research in the environmental field.

The Ministry of Finance will continue to expand cooperation between China and Japan on cleaner production projects.

The Ministry of Construction has promoted construction of municipal wastewater treatment facilities throughout China and this has been included as an important part in river basin management plan.

The Ministry of Water Resources has taken the lead in working out a plan for the conservation of water resources and an overall plan for water resources management in China and has issued *The Functional Divisions of Water in China*. It has identified the overall target for water resources conservation in China – in the short term, water quality in concentrated drinking water sources shall meet national standard and eco-environment in the rivers and lakes is gradually improved; in the long term, there shall be the sound cycle of water resources and aquatic eco-system so as to ensure the sustainable utilization of water resources and the sustainable economic and social development in the river basin and nearby regions. It has carried out monitoring of environmental quality in the farmlands and promoted comprehensive utilization of crop stalks. Two meetings have been convened on prevention and control of non-point source pollution in the Taihu Lake basin.

The State Environmental Protection Administration has called the 2nd meeting of the steering committee on prevention and control of water pollution in the Three Gorges Reservoir area to step up the construction of sewage treatment plant and waste treatment plant in the area as well as plan the management of pollution from ships and cruiser, cleaning of wastes at the bottom of the reservoir and control of industrial pollution. It has convened teleconferences concerning the operation to curb an upsurge of serious pollution in violation of environmental laws and regulation. It has sent 6 inspection teams and 3 secret inspection teams to check out on 16 provinces, autonomous regions and municipalities. It has, jointly with MOC, convened a national meeting on municipal waste and sewage treatment to work out better treatment of municipal waste and sewage throughout the country and to explore ways to commercialize the construction and operation of municipal environmental infrastructure. It is planned that in 2002, it will collaborate with SETC to convene the 3rd national meeting on prevention and control of industrial pollution so as to speed up prevention and control of industrial pollution and promote cleaner production. It has established Environmental Emergency Response and Accident Investigation Center and two environmental monitoring centers in East China and South China, which will enhance its ability for the monitoring and management of major environmental issues that cut across provincial border or a certain basin. It has taken the lead in working out environmental plans for some key basins and regions as

well as the *Plan for Prevention and Control of Water Pollution in the Yangtze River Basin, Yellow River and Songhuajiang River*.

The Chinese Academy of Sciences has collaborated with the business sector in completing the experimental project on cleaner production of chromite in Luoyang, Henan Province. It currently has a production capacity of 10,000 tons and is planning to expand to 100,000 tons.

The State Meteorological Administration is working on some policy issues, planning to utilize its existing meteorological monitoring stations and network to give dynamic monitoring of the functions and interaction of China's terrestrial ecosystem as well as aquatic ecosystem so as to provide valuable information to governments at various levels and basic data for relevant scientific research. It also aims to provide information about the floods in 7 major rivers and forecast and monitoring of sandstorms for disaster relief and reduction.

The State Ocean Administration has focused on the monitoring and surveillance on the management of waste dumping into the oceans. It has built up a monitoring mechanism on the sensitive issues concerning waste dumping, e.g. monitoring and evaluation of wastes, selection of dumping areas, and issuance of dumping license. It has also made it compulsory to register cases for approval so as to ensure there will not be serious pollution of the ocean environment. Concerning the monitoring and management of construction projects in the ocean, it has developed the *Regulations on Environmental Management of Oil Exploration in the Oceans*, *Technical Standards on the Dismantling of Oil Exploration Platforms in the Oceans*, and the *Regulations concerning the Examination and Acceptance of Environmental Facilities for Oil Exploration in the Oceans*. The completion of the project on Construction of Monitoring System for Marine Environment has greatly improved the basic infrastructure and working conditions of China's marine environment monitoring stations, upgraded the technology used in monitoring marine environment as well as the competency of the work force. SOA has been able to give continuous, accurate and long-term dynamic monitoring and real-time data transmission of specific point in the marine environment. Each year it carries out monitoring on the oceanic trends, quality of aquatic life, red tide and pollution contingency in the off-coast, offshore and deep sea areas.

The State Power Corporation has worked out *Plan on Prevention and Control of SO₂ Pollution in the Acid Rain Control Regions and SO₂ Emission Control Regions*, taking a comprehensive approach in reducing SO₂ emission by thermal power plants in the control regions. By the end of 2001, total SO₂ emission by SPC has been reduced by about 700,000 tons; SO₂ emission per unit electricity generated has been reduced by over 20%; SO₂ emission by thermal power plant in the Corporation has basically been brought under control. SPC has actively promoted domestic de-sulfurization technology and has built up more de-sulfur demonstration projects. It has developed Work Scheme for De-sulfurization in 18,000 Megawatt, planning that by 2005, SO₂ emission per unit electricity generated will be further reduced by 25% in comparison with 2000, so as to

fulfill the target laid out in the 10th Five-year-plan for Environmental Protection in China of reducing total SO₂ emission in the power sector by over 10%.

Beijing has developed *The Target and Action Plans for Prevention and Control of Environmental Pollution in Beijing*, giving priority to stage-by-stage control of air pollution. Pollutant reduction in the 10th five-year-plan is expected to surpass that of national standard; total environmental investment is expected to reach 52 billion yuan.

Tianjin has carried out cleaner production on all new projects. The Tianjin Economic and Technology Development Zone has experimented with the strategy of coordinating economic and environmental development by building eco-industry parks. It has improved the awareness of the industrial sector on cleaner production and environmental protection and encouraged them to invest in cleaner production. Enterprises are guided to reuse and recycle materials as much as possible and strive to achieve “zero pollutant discharging”. Enterprises are encouraged to undertake demonstration projects in cleaner production and promote the development of cleaner production. Tianjin has implemented *Law of People’s Republic of China on Promoting Cleaner Production* and incorporated it into relevant regulations of Tianjin. Priority projects include a number of municipal wastewater treatment plants, recycling of water, management of secondary rivers and tributaries, renovation of pipelines in old city districts and construction of facilities in new areas of the city.

Hebei Province has issued a notice from provincial government, forbidding the sale and use of phosphorous detergents throughout the province. It has exercised total emission control on pollutants in major basins. Pilot projects on auditing of cleaner production has started and a number of seriously-polluting enterprises which have high resource- and energy-consuming and low energy use rate have been selected as pilot projects for cleaner production. Environmental protection and conservation of resources have been included in the 10th five-year-plan for development of township and village enterprises in Hebei Province.

Liaoning Province has developed *The Plan for Pilot Projects on Developing Recycled Economy in Liaoning*, identifying the guiding principle and goal of promoting recycling in the province. By implementing *The 10th Five-year-plan on Management of Liaohe River* and the *Action Plan for Blue Sea in Liaoning*, it has strengthened pollution control in selected regions and basins and management various environmental functional zones in the offshore areas. It has reforms in some industrial sector by promoting the use of “cleaner vehicles” and has extended the use of LPG and CNG buses and taxicabs.

Shanghai has started to formulate its municipal regulations on cleaner production in the city so that cleaner production can be implemented and managed in accordance with law. A cleaner production demonstration project has been built at the Fifth Company of Baoshan Iron and Steel Corporation. It has also trained staff in charge of cleaner production so as to carry out auditing on cleaner production in the enterprises. Based on this fundamental work, it has started a review and evaluation of cleaner production plans for the metallurgy sector.

Jiangsu Province takes pollution control in Taihu Lake as an important part of its effort to create an ecologically friendly province. It has started the implementation of the Programme for Improvement of Water Environment in Meilianghu Area of Taihu Lake. Up to now, more than wastewater treatment plants have been established. The construction of river protective belts and the drainage of sewage in river-beds are under way.

In the prevention and control of industrial pollution, Jiangxi Province has given priority to reducing total industrial pollutant emission. It has implemented projects on industrial restructuring and upgrading to ensure that all emission of industrial pollutant meet the standard. It has started auditing on cleaner production and selected some sectors and cities as demonstration sites. It has started the ISO 14000 environmental management system and certification of environmental products. It has promoted the model of recycling economy, and supported the industrial sector to carry out the life-cycle pollution control in the entire industrial process by upgrading technology, reduce energy consumption and full utilization of materials.

Shandong Province has started to implement its stage-by-stage program on water pollution, hoping to reverse the trend of degradation first, then basically solve the problem, and finally completely solve the problem and reach a satisfactory standard. It will take advantage of the pollution control plans for the eastern part of the project on Diverting Water from the South to the North and control water pollution in the small basins so as to improve the overall water quality in the whole province.

Hainan Province has given priority to ensuring eco-safety and ecological conservation. It has carried out division of eco-functional zones in the mountainous regions in the middle part of the province. It has issued *Notice on Strengthening Prevention and Control of Pollution from Medical Wastes*. Environmental management of construction projects has also been enhanced, making sure that they do no damage to the surrounding environment. It has issued an *Emergency Notice on Environmental Management of Aquaculturing Projects in the Coastal Areas* to ensure safety and health of eco-environment in the province. *Human Habitat and Settlement* activities have been actively carried out. Water resources for municipal use are protected; in particular sites that are sources for drinking water are identified, protected and the water quality monitored. The price of water is adjusted to meet the needs of market mechanism. The province has gradually built up a monitoring network for soil and water conservation. In controlling soil erosion, the measures are evolving from simple afforestation to fostering biodiversity.

Chongqing City has made efforts to recycle materials and feedstock, by making comprehensive utilization of mineral intergrowth and associated minerals in the mining process, recycling and reusing waste water and residues in the production process, and recycling all kinds of used materials and wastes. Priority has been given to comprehensive utilization of gangue, coal ash and slag. A number of demonstration projects have been started in selected sectors and cities. A Guideline for Cleaner Production is being worked out, which will establish indicators for evaluation of cleaner

production and further promote awareness of cleaner production. It is planned that building materials and power sectors will be the next pilot projects on cleaner production.

Guizhou Province has included cleaner production into the 10th Five-year-plan on Environmental Protection in Guizhou. It supports collectively-owned and share-holding companies in the environmental sector, gives guidance to and encourage the integration of environmental research and commercialization. It has actively implemented the Guide to Cleaner Production Technologies in Major Industries in China.

Tibet Autonomous Region regards cleaner production and pollution control as an important component of developing modern industry. It has closed 15 types of serious polluting enterprises and banned the construction of 5 new types of similar enterprises. It has emphasized the integration of economic and social development with plans for environmental protection and ecological conservation.

Shaanxi Province has strengthened protection of the urban environment and has a number of model cities for their clean environment and sound ecosystem. It has strictly controlled pollution from vehicle exhaust, protected the sources of municipal drinking water and increased the green coverage in the cities. It has carried out EIA and the integration of environmental concerns in construction projects. It has encouraged the development of environmental industry and promoted cleaner production and environmental certification. It is determined to eliminate outdated technology and products that cause serious pollution so that industrial pollutant discharging will meet the standard.

Qinghai Province has made a great deal of effort in helping seriously polluting enterprises to phase out backward equipment and technology and promote cleaner production technology. Control of old pollution sources is combined with technology upgrading and innovation; promotion of cleaner technology is combined with concentrated pollution control. It has encouraged and promoted water conservation, recycle of wastewater and cleaner production technologies. Comprehensive utilization of resources is emphasized, aiming at waste reduction, reutilization and environmental-friendly end-of-pipe discharging. It has encouraged the exchange of wastes. Cleaner production technologies are studied and enterprises are guided to implement cleaner production.

6 Energy

The State Economic and Trade Commission has worked out plans concerning sustainable development with 8 sub-plans on energy conservation and comprehensive utilization of resources, industrial water conservation, fuel oil conservation and alternatives fuels, development of environmental industries, new energy and sustainable energy industry development, innovations in wall materials, development of loose cement and recycling and reuse of renewable resources. Emphasis is put on conservation of industrial water usage and fuels. Jointly with the State Tax Administration, it has publicized the first *List of Water Conservation Equipment/Products Encouraged by the State*, completed *The*

Report on Industrial Water Price, Water Resource Fees and Water Discharge Fees, studied and made recommendations on conservation of fuel oils and alternative fuels. It has promoted energy conservation and development of new energy industry by working out *Regulation on Conservation of Oil; Regulations on Energy Efficiency Labels*, and *Regulation on Publicizing Energy Use of Major Enterprises*. It has started certification of energy-efficient products and promoted the implementation of energy efficiency standard and labeling, establishing a preliminary framework for the implementation of energy efficiency labeling system in China. It has advocated for energy efficiency in the government and issued annual report on the solar energy industry. It is making preparations for issuing *Regulations on Renewable Energy and Regulations on Management of Wind Energy*. It has started over 100 energy conservation projects in metallurgy, non-ferrous metals, building materials, chemical engineering, power and paper-making industries.

The Ministry of Science and Technology has included clean coal technology and its follow-up technology as part of the energy technology in the State Plan for Hi-tech Research and Development and has given it priority in support.

The Ministry of Finance has used foreign loans for investment in energy, transportation and environmental protection. Since 1996, it has used loans in Japanese Yen for investment in environmental projects. At present most projects are proceeding smoothly; some have been completed and are achieving desired result.

The Ministry of Land Resources is going to, jointly with Geothermal Energy Committee, convene in Beijing an international conference on geothermal resources to discuss issues on sustainable development of geothermal resources in the 21st century, promote development and conservation of geothermal energy and enhance international cooperation in this field.

The Ministry of Water Resources has started small hydro-power projects in 400 rural counties in China in 2001 as part of the plan for alternative power generation in rural areas in the 10th five-year-plan period. In 2002, total planned capacity of the small hydro-power plants reached 3500 megawatt, of which 1500 megawatt have been generated. It is estimated that during the 10th five-year-plan period, a total capacity of 7500 megawatt will be installed in these hydro-power projects.

The Ministry of Agriculture has started the Small Energy Project in Rural Regions, investing 100 million per year on energy development in rural regions in China, promoting the use of high-efficiency stoves, biogas and solar energy. In 2001 and 2002, an annual investment of 99.5 million Yuan has been made on these projects, which cover 2036 villages in 369 counties, benefiting 480,000 rural households. In total the projects have resulted in 300,00 biogas pits, 177 small biogas projects, 112 stalk gasification projects, 4727 small wind power systems, 70,000 solar stoves and 100 solar energy houses.

In addition to continuing with its research on clean coal technology, The Chinese Academy of Science has done research on solar energy and tidal energy development and has made some progress.

Tianjin City will continue to adjust its gas consumption mix so as to significantly improve air quality in the city. It will increase the use of natural gas for both industrial sector and in the residence and public buildings. Heating will mainly be provided by cogeneration, supplemented by large-scale boiler units so that gradually there will be no coal burning in the downtown area of the city. It gives priority to the use of wind power, solar energy and bio-energy and efforts have been made to promote biogas in the rural areas. It has given subsidies and funding support to rural environmentally-friendly energy construction projects, and continued to expand its demonstration projects on biogas utilization in large and medium-sized animal and poultry farms. It has conducted activities on energy efficiency and conservation in all relevant sectors.

Hebei Province has integrated environmental protection with industrial and energy restructuring, phasing out outdated production equipment not in line with state industrial policy, and restructuring energy use in the cities to reduce environmental pollution. It has encouraged the use of clean energy and the use of natural gas.

Liaoning Province has adjusted energy structure by using clean energy, developing non-coal-using industry and deep processing of coal and doing its best to close small coal mines which cause waste of resources and environmental damage. It promotes the use of renewable energy such as wind power, hydro-power and solar energy, and the application clean energy, such as stalk gasification and biogas in rural areas. It has extended the use of clean coal technology such as gasification and circular fluid bed. *The Regulation on Energy Conservation in Liaoning Province* as well as *Plan on Industrial Water Conservation in Liaoning*, *Policies on Support to Wind Power Generation in Liaoning*, has been issued. It is now in the process of working out the *Regulation concerning Rural Energy Development in Liaoning*. Rural energy projects have been carried out in 10 counties, which have provided training to about 2000 farmers and technical people for the management, extension and construction of these projects.

Shanghai City has adjusted its energy consumption and increased the use of clean energy. Coal burning has basically disappeared in the central part of the city inside the Inner Ring Road. It will import a moderate amount of LPG and support the development and utilization of new and renewable energy such as wind power, solar energy, tidal energy and biogas. It has also worked out energy conservation measure so as to improve energy efficiency. *The Regulation on Auditing of Energy Use in Shanghai* has been issued, which will require the inclusion of evaluation on energy efficiency in the feasibility study of projects.

Jiangxi Province has developed its 10th *Five-year-plan on Energy Conservation and Comprehensive Utilization of Resources*, giving priority to energy conserving technologies, such as the use of clean coal, and the use of natural gas as a substitute for fuel oil, advanced coal washing, selection and deep processing, large circular fluidized

bed, high-efficiency generators, heat and power cogeneration, centralized heating and heat and energy cascading. In the 10th Five-year-plan, it will limit the construction of new thermal power plants. It has promoted the utilization of coal bed gas, extended the technology of coal liquefaction and gasification, and applied the use of biogas, stalk gasification, solar energy and wind power in appropriate rural regions.

Hainan Province has strived to build itself into a CFC-free Province, further promoting the use of environmental-friendly refrigerants. It has proceeded with cleaner production in the industries in the province, extended the use of solar energy and wind power, speeded up the retrofitting of vehicles for environmental-friendly fuels. It has adjusted fuel consumption in the cities and towns and increased the use of LPG to replace the use of firewood as fuel.

Chongqing City has formulated its regulations on energy conservation, using clean energy as fuel to replace coal burning in 1153 boilers and 1500 hot-water heaters in the city. It has continued to encourage the development of new and renewable energy sources such as hydro-power and has used price policy to support the extension and use of clean energy.

Guizhou Province has reformed its energy structure to use more clean energy. It has implemented *Some Proposals of the State Council on Relevant Issues in the Acid Rain and SO₂ Control Regions*, increasing the production of low-sulfur content coal, making use of coal bed gas, gradually increasing the use of clean energy and reform or eliminate small and medium-sized coal-burning boilers.

Tibet Autonomous Region has regarded the use of hydro-power, wind power and solar energy as important measures in restructuring energy consumption, protecting environment and improving environmental quality and has strived to extend their use.

Shaanxi Province has given support to research and development in biological coal blocks, alcohol fuels and film technology. The use of biogas and stalk gasification is priority projects in the rural areas; the use of wind power in the windy north part of the province is experimented. The practice of paying for mine ownership and mining right has been practiced. The use of water conservation facilities has been encouraged. Concerning the development and use of clean energy, the province plans to materialize natural gas, centralized heating and clean energy projects in the 10th five-year-plan period and start natural gas power project so as to increase the proportion of electricity generated by natural gas.

Qinghai Province has combined energy conservation with the use of clean energy and is phasing out backward equipment and technology and improving energy efficiency and structure. It is using coal, electricity and gas to replace wood and grass which are traditionally used as fuel in the rural and husbandry areas. It is also starting natural gas and centralized heating projects. Solar energy, wind power, and briquette technology are also being developed.

7 Transportation

The Ministry of Transportation agrees to make comprehensive plan for transportation development and encourage the development of public transportation and clean fuels used in vehicles.

Tianjin City will gradually build up a well-planned modern, multi-level urban transportation network including main thoroughfares and secondary roads with overpasses at major artery crossings to ensure smooth traffic. Pollution from vehicles will be strictly controlled, with periodic checks on automobile manufacturers, and strict monitoring on vehicles on the road, so as to control vehicle pollution from the source.

Hebei Province has given more funding to the basic research on transportation technology to ensure its development does not pose a threat to the environment. It has carried out EIA, particularly eco-environment impact assessment, on all new or expansion projects. It has paid attention to using new, environmental-friendly materials, new technologies and recycling of solid wastes. Cares have also been taken to minimize the use of land.

Liaoning Province has given priority to developing public transportation system in the cities. Urban rail systems have been built in Shenyang and Dalian.

Shanghai City has given priority to public transportation and aims to build a modern transportation hub that is in line with Shanghai's overall goal in urban development. The system will integrate cargo and passenger transportation, use clean fuel as much as possible. The city has started retrofitting taxicabs with LPG and developing CNG buses. Meanwhile, the government has developed policies encouraging the use of clean fuels on public transportation enterprises.

Jiangxi Province has developed its special plan on transportation development in the 10th five-year-plan period. Transportation systems must be planned and constructed according to the principle that they are conducive to economic development, energy-efficient while at the same time being environmentally and human friendly. Priority has been given to developing public transportation. Old and dilapidated buses are being replaced and eliminated. It is being considered that clean fuel buses and taxicabs will be used in Nanchang City and the Mount Lu Scenic Area.

Chongqing City has worked out its plan for comprehensive transportation development in the city, requiring all transportation projects to carry out EIA. Environmental management of transportation is strictly exercised. Use of unleaded gasoline and natural gas vehicles are encouraged. Seriously polluting diesel mini-buses have been forbidden in the downtown area, through monitoring on the road. In addition, the road sections have been designated where the use of car sirens is banned. Strict requirements have been put forth for classification, packaging, loading, unloading and storing those hazardous goods and materials. Strict criteria have been applied to those companies engaged in the

transportation of hazardous goods and materials. Chongqing has also issued a municipal regulation concerning the prevention and control of pollutants from vehicle exhausts.

8 Trade and Environment

SDPC is formulating the rules for managing the projects for implementing the Clean Development Mechanism (CDM) under the Kyoto Protocol. China will undertake the cooperation with developed countries in the field of energy through implementing CDM projects.

The Ministry of Construction has worked together with SDPC and SEPA on the relevant policies for industrializing wastewater treatment and disposal of municipal wastes. The proposed policies have been submitted to the State Council for approval.

MOFTEC is playing an active role in the international negotiations concerning climate change and sustainable development issues. MOFTEC is also promoting the ratification of the Cartagena Protocol on Biosafety and preparing to participate in CDM projects for the implementation of the Kyoto Protocol.

The State Forestry Administration is organizing studies on the policies and measures for implementing CDM projects and biosafety management related to forest.

The Chinese Academy of Sciences has established a key research project on WTO and the medium and long term strategy for agricultural development in China. This project aims to explore how China will restructure its agriculture, prioritize its agricultural layouts, increase the competitiveness of agricultural products, ensure the food security as well as increase the farmers' income, within the context of WTO. The results of this project will provide a basis for formulating a long or medium term development of agriculture in China. Meanwhile, this project will provide data and a technical platform for similar studies in China.

The State Meteorological Administration has been participating actively in the negotiations concerning climate change and sustainable development. SMA has organized a careful analysis of the Third Assessment Report of IPCC by bringing together relevant departments, research institutions and scientists working on climate change. Meanwhile, SMA is contributing to the compilation of the Fourth Assessment Report. SMA has drafted a plan for systematic climatic observation and monitoring in China.

Chongqing has organized studies on the impacts on its industry, agriculture, foreign trade and environment brought about by the entry of WTO. A number of measures have been proposed based on the studies.

Guizhou Province gives priority to the import of those equipments used for environmental protection. In attracting foreign investment and speeding up technology transfer, the province is exploring CDM model.

Tibet Autonomous Region has formulated the policies and measures compatible with the WTO rules, through revising and streamlining some administrative rules and procedures. The region has revised its regulation for environmental protection to make it more geared to the environmental situation in the region.

Exit