

# **Action Plan for Water Pollution Prevention**

**English Translation  
May 2015**



This is an unofficial translation of the Action Plan for Water Pollution Prevention (Published by The State Council of the People's Republic of China on 2 April 2015), undertaken by the EU - China Environmental Governance Programme for the convenience of international observers. The EU - China Environmental Governance Programme takes no liability for any errors in this translation. An official translation of the Law is expected to be published by the Chinese government in due course.

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1. Public access to environmental information
2. Public participation in environmental planning and decision making
3. Access to justice in environmental matters
4. Corporate environmental responsibility

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# Action Plan for Water Pollution Prevention

The water environment is associated with the interests of the general public; it is crucial to the developing a well-off society and realizing great Chinese dream of rejuvenating the nation. At present, problems such as low water environment quality, serious water ecological damage and varied environmental risks are severe in some regions, which are harmful to people's health and sustainable economic and social development. This action plan is formulated to enhance water pollution control and ensure water safety for the nation.

Overall requirements: We will fully implement the spirit of the 18th CPC National Congress and that of the 2nd, 3rd and 4th Plenary Sessions, promote eco-civilization development, focus on improving water environment quality, give priority to water resource conservation, make balanced spatial arrangement, give systematic treatment and attach equal importance to conservation and treatment. We will implement the strategy featuring safety, cleanness and health, improve source control, take scientific management methods in different drainage areas and regions and in stages, and promote water pollution control, water ecological protection and water resource management in a systematic way. We will also stick to the coordination between the government and the market, stress innovation, conform to laws and regulations, form the most strict environmental protection system and develop an accountability system. At the same time, we will advocate public participation, form a new water pollution control system with the government as the guide, the enterprises as the main players, the market as the driver and the public as the participants, realize environmental, economic and social benefits at the same time, and strive to develop a beautiful China with a healthy environment.

## **Goals:**

We plan to achieve the following goals by 2020:

The water quality in the country will be improved significantly, with a sharp decline in heavily polluted water areas;

Drinking water safety guarantee level will rise continuously;

Groundwater overdraft will be strictly controlled;

Groundwater pollution trend will be contained;

Environment quality of offshore areas will remain stable with an improving trend;

The water ecological environment in Beijing-Tianjin-Hebei region, the Yangtze River Delta and the Pearl River Delta will improve.

By 2030, we will strive to improve the overall water environment quality of the whole country and preliminarily restore the functions of the water ecological system.

By the middle of this century, the ecological environment quality will be improved comprehensively, and a virtuous cycle of the ecological system will be achieved.

### ***Major indicators:***

By 2020, the water quality in 70% of the drainage areas of the Yangtze River, the Yellow River, the Pearl River, the Songhua River, the Huaihe River, the Haihe River and the Liaohe River will be excellent (no lower than level-3); the proportion of black and odorous water bodies in build-up areas in cities at prefecture level and above will be limited to less than 10%; the proportion of drinking water sources with water quality no lower than level-3 in cities at prefecture level or above will reach 93%; the proportion of ground water with poor quality will be limited to 15%; 70% of the offshore areas will have excellent water quality (level-1 and level-2); the proportion of cross-sections that have lost functional quality (lower than level-5) in Beijing-Tianjin-Hebei region will reduce by 15%; the Yangtze River Delta and the Pearl River Delta will strive to eliminate waters that have lost functional quality.

By 2030, 75% of the drainage areas of the seven rivers will have excellent water quality; black and odorous water bodies in build-up areas in cities at prefecture level and above will be eliminated; the proportion of drinking water sources with water quality no lower than level-3 in cities will reach 95%.

## **1. Comprehensive controlling pollutants discharge**

(1) Strengthening industrial pollution prevention and control and banning “Ten small” companies which are not in accordance with the national industrial policy. We will examine small industrial companies with low equipment levels and poor environmentally protective facilities. By 2016, in line with laws and regulations concerning water pollution control, we will phase all production projects that go against national rules and pollute the water environment, such as small paper mills, tanneries, textile printing, colorant, coking, sulfur smelting, arsenic smelting, petroleum refining, electroplating and pesticides. (The initiative is guided by the Ministry of Environmental Protection, attended by the Ministry of Industry and Information Technology, the Ministry of Land and Resources and the Energy Bureau, and implemented by governments at all levels. The actions hereinafter are all implemented by local governments at all levels.)

Launching special programs on ten major industries. We will formulate specific rectification plans on these industries, including papermaking, coking, nitrogen fertilizer, nonferrous metal, textile, agricultural products procession, manufacture of drug substances, tanneries, pesticides and electroplating, in order to adopt clean production methods. Discharge of major pollutants in construction, renovation and expansion projects will be replaced on an equal or decremental scale. By the end of 2017, the papermaking industry will strive to complete the elemental chlorine free technology and adopt other low-pollution pulping technologies; the steel industry will complete the Coke Dry Quenching technical reform, the nitrogenous fertilizer industry will complete the phlegma hydrolysis analytic technical reform, the printing and dyeing industry will complete the low-drainage dyeing technical reform, the pharmaceutical industry will complete the enzyme production technical reform, and the tannery industry will complete the chromium-reduction and closed recycle technical reform. (This initiative is guided by the Ministry of Environmental Protection and attended by the Ministry of Industry and Information Technology.)

Carrying out centralized water pollution treatment in industry-dense areas. We will enhance pollution treatment in industrial clusters such as economic and technological development zones, high-tech development zones and export processing zones. The wastewater in the industrial clusters must be pre-treated before it is transferred to the central treatment facility. Wastewater and garbage treatment facilities should be planned in the construction and upgrading of industrial clusters. Industrial clusters should all be equipped with central wastewater facilities and online monitoring equipment by the end of 2017; this work will be done one year in advance in Beijing-Tianjin-Hebei region, the Pearl River Delta and the Yangtze River Delta. Otherwise, projects that will increase water pollutant discharge will be suspended, and their qualifications will be cancelled. (This initiative is guided by the Ministry of Environmental Protection and attended by the Ministry of Science and Technology, the Ministry of Industry and Information Technology and the Ministry of Commerce.)

(2) Strengthening municipal wastewater treatment. We will accelerate development and upgrading of urban wastewater treatment facilities according to local conditions. By the end of 2020, urban wastewater treatment facilities should reach relevant discharge standards or recycling requirements. The urban wastewater treatment facilities in sensitive areas (major lakes, reservoirs and offshore waters) will reach the 1A discharge standard. Cities where water quality in build-up areas is lower than the IV-level standard should adopt the 1A discharge standard in building urban wastewater treatment facilities. According to the National New Urbanization Plan, by 2020, all counties and key towns should have wastewater collection and treatment capacity; the wastewater treatment ratio in counties and cities will reach 85% and 95% respectively. This goal will be realized one year in advance in Beijing-Tianjin-Hebei region, the Pearl River Delta and the Yangtze River Delta. (This initiative is guided by the Ministry of Housing and Urban-Rural Development and attended by the National Development and Reform Commission and the Ministry of Environmental Protection.)

Strengthening the construction of sewage supporting pipe networks. We will enhance wastewater closure and collection in urban villages, old towns and urban fringe areas. The existing combined drainage system should be transformed into separate drainage systems; if they are difficult to transform, they actions such as closure, storage and treatment should be taken. The supporting pipelines should be designed, constructed and put into operation simultaneously with the wastewater treatment facilities. New towns, except those in deserts, should adopt the separate drainage method. Areas with proper conditions should promote preliminary rainwater collection, treatment and resource utilization. By 2017, municipalities, provincial capitals and municipalities with independent planning status should be able to collect and treat all wastewater; other build-up areas of prefecture-level cities should be able to do so by 2020. (This initiative is guided by the Ministry of Housing and Urban-Rural Development and attended by the National Development and Reform Commission and the Ministry of Environmental Protection.)

Improving sludge treatment and disposal. Sludge produced by wastewater treatment facilities should go through stabilizing treatment, innocent treatment and resource-recovering treatment. Substandard sludge is prohibited to enter farmlands. We will ban all illegal sludge stack areas. Existing sludge treatment facilities should complete their upgrading by the end of 2017, and the innocent treatment ratio of sludge in cities at prefecture level and above should reach

90% by 2020. (This initiative is guided by the Ministry of Housing and Urban-Rural Development and attended by the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Environmental Protection and the Ministry of Agriculture.)

(3) Carrying forward rural agricultural pollution prevention and control. We will control livestock pollution. We will designate restricted areas for livestock, and shut down or relocate livestock farms and breeding specialized households in restricted areas by the end of 2017; this work will be done one year in advance in Beijing-Tianjin-Hebei region, the Pearl River Delta and the Yangtze River Delta. Existing large-scale livestock farms should be equipped with fecal sewage storage, treatment and utilization facilities; fecal sewage in free-range farms should be collected by each household, and processed and utilized together. From 2016 on, fecal sewage recycling treatment and separate sewage facilities should be incorporated in the construction, renovation and expansion of large-scale livestock farms. (This initiative is guided by the Ministry of Agriculture and attended by the Ministry of Environmental Protection.)

Controlling agricultural nonpoint source pollution. We will formulate and implement comprehensive plans to prevent agricultural nonpoint source pollution. We will publicize experience of low toxic and less-persistent pesticide subsidy pilot programs, and carry out uniform control of crop diseases and pests. We will test soil for formulated fertilization and promote precise fertilizer technology and instruments. We will improve regulations and standards over high-standard farmland development and land rearrangement and clarify requirements for new high-standard farmland. Sensitive areas and large and medium-sized irrigation areas should utilize existing ditches, lakes and pits to allocate aquatic plants, fences and filter dams and construct ecological ditches, sewage purification ponds and storage ponds to purify farmland drainage and surface runoffs. By 2020, the coverage rate of the testing soil for formulated fertilization technology will reach 90%, fertilizer utilization ratio will reach 40%, and the coverage ratio of uniform control of crop diseases and pests will reach 40%. This goal will be realized one year in advance in Beijing-Tianjin-Hebei region, the Pearl River Delta and the Yangtze River Delta. (This initiative is guided by the Ministry of Agriculture and attended by the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Land and Resources, the Ministry of Environmental Protection, the Ministry of Water Resources and the State Quality Inspection Administration.)

Adjusting the structure and distribution of planting business. We will reduce water use, and plant crops that need less fertilizer and have outstanding environmental effects. In Gansu, Xinjiang, Hebei, Shandong and Henan where surface water and groundwater are overexploited and agricultural water consumption is high, we should reduce the planting area of water-intensive crops, and plant drought tolerant crops and cash forests. By 2018, we will comprehensively manage the irrigation of 33 million mu of farmland, and reduce water use by 3.7 billion cubic meters. (This initiative is guided by the Ministry of Agriculture and the Ministry of Water Resources, and attended by the National Development and Reform Commission and the Ministry of Land and Resources.)

Accelerating rural environment comprehensive consolidation and management. We will carry out uniform planning, construction and management of rural wastewater treatment in every-county level administrative region, and promote the transfer of urban wastewater treatment facilities to rural areas in areas with proper conditions. We will deepen the 'treatment for award' policy, run clean-up projects, dredge river channels and promote integrated management of rural environment. By 2020, the number of villages that have completed integrated environmental treatment will reach



130 thousand. (This initiative is guided by the Ministry of Environmental Protection and attended by the Ministry of Housing and Urban-Rural Development, the Ministry of Water Resources and the Ministry of Agriculture.)

(4) Strengthening shipping port pollution control. We will actively treat pollution from ships and abandon expired ships according to laws. We will revise environmental protection standards for ships, equipment and devices by classifications and grades. We will apply new standards for coastal vessels that come into use after 2018 and inland vessels that come into use after 2021; other vessels and ships should be upgraded by the end of 2020; those that cannot reach the standard after the upgrading will be eliminated. Ships sailing in international route in China should exchange ballast water or be equipped with ballast water sterilization treatment facilities. We will regulate shipbreaking and forbid foreshore shipbreaking. (This initiative is guided by the Ministry of Transport and attended by the Ministry of Industry and Information Technology, the Ministry of Environmental Protection, the Ministry of Agriculture and the State Quality Inspection Administration.)

Enhancing pollution control ability of ports. We will formulate and implement pollution control plans for ports, wharves and loading and unloading stations. We will accelerate the development of garbage reception, transfer and treatment facilities, improve the ability to receive and treat oily sewage and tank washings of chemicals, and sharpen pollution emergency response capacity.

Ports, wharves and loading and unloading stations located in coastal areas and along inland rivers should meet the construction requirements by the end of 2017 and the end of 2020 respectively. Responsible persons of ports, wharves and loading and unloading stations should formulate emergency plans for water pollution caused by ships and relevant activities. (This initiative is guided by the Ministry of Transport and attended by the Ministry of Industry and Information Technology, the Ministry of Housing and Urban-Rural Development and the Ministry of Agriculture.)

## **2. Carrying forward economic restructuring and upgrading**

(5) Adjusting the industrial structure and phasing out backward production facilities according to the law. From 2015 on, all places should formulate and implement annual backward capacity elimination plans according to the guidance catalogues on the elimination of backward manufacture techniques, facilities and products, the guidance catalogues on industrial restructuring and the pollutant discharge standards of relevant industries, and submit the plans to the Ministry of Environmental Protection and the Ministry of Industry and Information Technology for reference. The examination and approval of new projects will be suspended in areas that fail to accomplish the elimination task. (This initiative is guided by the Ministry of Industry and Information Technology and attended by the National Development and Development Commission and the Ministry of Environmental Protection.)

Making environmental approvals strict. We will clarify the requirements of environmental approval, elaborate on function areas and implement a differentiated environmental approval policy. We will establishment a monitoring and assessment system of the water environment's bearing capacity. In areas with overload capacity, we will implement water pollutant reduction plans and speed up the adjustment of development plans and industrial structures. By 2020, we will complete the capacity assessment of water resources and water environment on city and county levels. (This initiative is guided by the Ministry of Environmental Protection and attended by the Ministry of Housing and Urban-

Rural Development, the Ministry of Water Resources and the State Oceanic Administration.)

(6) Optimizing spatial planning. We will determine the layout, structure and scale of development in a reasonable manner, and give full consideration to the capacity of water resources and water environment. We will arrange urbanization, land and population distribution and production on the basis of water resources. Major projects will be located in preferred or key development zones, and they will conform to the urban-rural plan and the general land-use plan. We will advocate water-conserving and efficient modern agriculture, high-tech industries and ecological-friendly tourism, constrain the development of water-consuming and polluting industries in water-deficient, heavily polluted areas and sensitive regions, and control the pollutant discharge in constructing, renovating and expanding key industrial projects. We will control the environmental risks of projects related to oil processing, chemical production, pharmaceutical manufacturing, chemical fiber manufacturing, non-ferrous metal metallurgy and textile printing along seven major rivers, and rationally arrange production equipment and hazardous chemical warehousing facilities. (This initiative is guided by the National Development and Reform Commission and the Ministry of Industry and Information Technology, and attended by the Ministry of Land Resources, the Ministry of Environmental Protection, the Ministry of Housing and Urban-Rural Development and the Ministry of Water Resources.)

Pushing forward the withdrawal of polluting companies. Polluting companies in build-up areas engaging in metal production, non-ferrous metal metallurgy, papermaking, printing, dyeing, API manufacturing and chemical production should be shut down or relocated according to relevant laws and regulations. (This initiative is guided by the Ministry of Industry and Information Technology and attended by the Ministry of Environmental Protection.)

Protecting the ecological space. We will enhance management of the urban blue lines, and maintain a certain proportion of waters in urban planning areas. New projects will be prohibited to occupy water areas without legal permission. We will strictly manage the use of waterlines, implement relevant regulations, laws and technical standards in land exploitation and clarify the management and protection area of rivers, lakes and oceanfront. Illegal occupation of such areas should be rectified within a certain time limit. (This initiative is guided by the Ministry of Land and Resources and the Ministry of Housing and Urban-Rural Development and attended by the Ministry of Environmental Protection, the Ministry of Water Resources and the State Oceanic Administration.)

(7) Promoting the development of recycling. We will strengthen the recycle and reuse of industrial wastewater and mine drainage, and use mine water as the main source of supplementary water in coal mining areas and water for production and ecological purposes in surrounding areas.

We will also enhance the recycle of coal-washing wastewater, and encourage water-consuming enterprises in the field of metal production, textile, paper-making, oil processing, chemical production and leather-making to recycle wastewater. (This initiative is guided by the National Development and Reform Commission and the Ministry of Industry and Information Technology, and attended by the Ministry of Water Resources and the Bureau of Energy.)

Promoting the utilization of recycled water. We will improve water recycle facilities in water-deficient and polluted cities. Recycled water should be the first water source for industrial production, urban afforestation, road cleaning,

vehicle washing, construction and landscaping. We will push forward the recycle of wastewater in highway service areas. Water applications from metal, thermal power, chemical, papermaking and dyeing projects that have not fully utilized available recycled water will be rejected. From 2018 on, newly-built public buildings with a floorage of over 20,000 square meters and indemnificatory houses with a floorage of over 20,000 square meters in Beijing, over 50,000 square meters in Tianjin and over 100,000 square meters in Hebei should be equipped with reclaimed water facilities. We will also actively promote the installation of such facilities in other new houses. By 2020, the utilization ratio of recycled water will exceed 20% in water-deficient cities and 30% in Beijing, Tianjin and Hebei. (This initiative is guided by the Ministry of Housing and Urban-Rural Development, and attended by the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Environmental Protection, the Ministry of Transport and the Ministry of Water Resources.)

Promoting the utilization of sea water. In the power, chemical and oil industries in coastal areas, we will advocate to use sea water for circulation cooling. We will also promote the use of sea water as supplementary water for life in cities with proper conditions. (This initiative is guided by the National Development and Reform Commission and attended by the Ministry of Industry and Information Technology, the Ministry of Housing and Urban-Rural Development, the Ministry of Water Resources and the State Oceanic Administration.)

### **3. Making major efforts on conservation and protection of water resources**

(8) Controlling total quantity of water use. We will implement the most stringent water resource management and develop an index system of total water use quantity. We will enhance water resource research in relevant plans and projects, and take the local water conditions and flood control demand in making economic and social development plans, major construction project layouts and overall urban plans. New applications for water access in areas with a total water use quantity exceeding the index will be suspended. We will make plans to regulate water use of institutions covered by water drawing permits and other major water-consuming units. Water use in construction, renovation and expansion projects should reach advanced levels in the industry, and the water-saving facilities should be planned, installed and put into operation with the main part of the project. We will formulate a list of institutions that should be closely monitored. By 2020, the total water use quantity in the country will be limited to 670 billion cubic meters. (This initiative is guided by the Ministry of Water Resources and attended by the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Housing and Urban-Rural Development and the Ministry of Agriculture.)

Strictly controlling groundwater overexploitation. Geological disaster risk assessment should be carried out before exploiting groundwater in areas with surface subsidence, ground fractures and karst collapses. We will control the exploitation of deep-seated confined groundwater; geothermal water and mineral water should be exploited with water drawing permits and mining permits. We will regulate shaft construction and management, examine and register existing shafts, and shut down self-sustaining wells that are unapproved or located within the public water supply network. We will formulate groundwater exploitation plans for areas with surface subsidence and saltwater intruded areas, and take comprehensive measures in over-exploited areas in North China. In over exploited areas, excess water

drawing for industrial, agricultural and service purposes will be rejected. In Beijing-Tianjin-Hebei region, agricultural infrastructure projects such as land reclamation, agricultural development and poverty relief should not be carried out on condition of well drilling. By 2017, we will finish the delimiting of prohibition and limit areas of water exploitation and surface subsidence control zones; this work will be completed one year in advance in Beijing-Tianjin-Hebei region, the Pearl River Delta and the Yangtze River Delta. (This initiative is guided by the Ministry of Water Resources and the Ministry of Land and Resources, and attended by the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Finance, the Ministry of Housing and Urban-Rural Development and the Ministry of Agriculture.)

(9) Improving water efficiency. We will establish water efficiency assessment systems such as the water use quantity per 10000 yuan of GDP, and incorporate water-conservation projects into performance assessments of local governments. We will also incorporate recycled water, rainwater and brackish water into the uniform water resource allocation. By 2020, the total water use quantity per 10000 yuan of GDP and the total water use quantity per 1000 yuan of industrial added value will reduce by over 35% and 30% respectively. (This initiative is guided by the Ministry of Water Resources and attended by the National Development and Reform Commission, the Ministry of Industry and Information Technology and the Ministry of Housing and Urban-Rural Development.)

Improving industrial water-saving and conservation. We will formulate catalogues of technologies, techniques, products and equipment advocated or eliminated by the country, and improve the water use quota standard for water-intensive industries. We will carry out water conservation examination, water balance tests and water efficiency assessment and strictly manage water use quotas. By 2020, the quotas of water-intensive industries such as power, steel, textile, papermaking, petrochemical production, chemical production and food fermentation will meet advanced standards. (This initiative is guided by the Ministry of Industry and Information Technology and the Ministry of Water Resources, and attended by the National Development and Reform Commission, the Ministry of Housing and Urban-Rural Development and the State Quality Inspection Administration.)

Strengthening urban water-saving and conservation. We will prohibit the production and sales of products and facilities that do not comply with water-saving standards. Public buildings must use water-saving facilities, and domestic devices such as water taps and toilet tanks that do not reach the water-saving standard should be phased out within a time limit. We will encourage families to use water-efficient devices, and renovate and upgrade water supply pipelines that have served for over 50 years and pipelines made of low-quality materials. The leakage ratio of public water supply pipelines will be limited to 12% by 2017 and 10% by 2020. We will actively promote low-impact development patterns, and build rainwater recycle facilities with storage, utilization, discharge and other functions. The permeable area of harden ground in new urban areas should reach 50%. By 2020, water-deficient cities at prefecture level or above will all reach the national standard for water-saving cities; such cities in Beijing-Tianjin-Hebei region, the Yangtze River Delta and the Pearl River Delta will reach this standard one year in advance. (This initiative is guided by the Ministry of Housing and Urban-Rural Development and attended by the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Water Resources and the State Quality Inspection Administration.)

Improving agricultural water-saving and conservation. We will promote water-saving irrigation technologies such as canal seepage control, pipeline water delivery, sprinkling irrigation and micro-irrigation, and optimize irrigation metering equipment. We will promote large-scale water-saving irrigation and water-saving and anti-drought agricultural technologies in Northeast China, Northwest China and Huanghuaihai Region. By 2020, the water-saving reform and irrigation facility construction in large irrigation areas and major medium-sized irrigation areas will complete; the area covered by water-saving irrigation projects will reach 700 million mu; the effective utilization coefficient of irrigation water will reach 0.55. (This initiative is guided by the Ministry of Water Resources and the Ministry of Agriculture, and attended by the National Development and Reform Commission and the Ministry of Finance.)

(10) Protecting water resources in a scientific manner. We will optimize the assessment system on water resource protection, enhance supervision and management of water functional areas and evaluate the pollutant carrying capacity of waters. (This initiative is guided by the Ministry of Water Resources and attended by the National Development and Reform Commission and the Ministry of Environmental Protection.)

Enhancing water dispatching management of rivers and lakes. We will improve dispatching management plans, take measures such as joint dispatching of gates and dams and ecological water compensation, reasonably arrange released water quantity and drainage periods, meet the basic ecological water demand of rivers and lakes and pay special attention to ensuring basic ecological flow during dry seasons. (This initiative is guided by the Ministry of Water Resources and attended by the Ministry of Environmental Protection.)

Determining ecological flow in a scientific manner. We will carry out experiments in the Yellow River and the Huaihe River and determine the ecological flow (water levels) by stages and in groups, and take the results as important reference for water dispatching. (This initiative is guided by the Ministry of Water Resources and attended by the Ministry of Environmental Protection.)

#### **4. Strengthening scientific and technological support**

(11) Promoting and demonstrating appropriate technology. We will accelerate and promote the application of appropriate technology, especially drinking water treatment, urban rainwater collection and recycle, safe use of recycled water, water ecological restoration and livestock breeding pollution prevention. We will optimize the environmental technology evaluation system, enhance the development of the platform for environmental-friendly technology sharing and promote the transformation of technological achievements. We will give full play to enterprises, encourage major water treatment enterprises to establish strategic alliances for technological innovation with scientific institutions and universities, and popularize advanced technology of emission reduction and cleaner production. (This initiative is guided by the Ministry of Science and Technology and attended by the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Environmental Protection, the Ministry of Housing and Urban-Rural Development, the Ministry of Water Resources, the Ministry of Agriculture and the State Oceanic Administration.)

(12) Researching and developing advanced technologies. We will integrate technological resources, and utilize relevant national technological plans (special projects or funds) to develop technologies such as advanced wastewater treatment in key industries, domestic sewage treatment with low costs and high standards, sea water desalination, desalination of highly-salinized industrial wastewater, disposal of toxic pollutant traces in drinking water, groundwater pollution restoration and treatment of hazardous chemical accidents and sea oil spills. We will do researches on water environmental criteria including organics and heavy metals, water pollution's impact on human health, risk assessment of new pollutants, water environmental damage assessment and the use of high-quality recycled water as supplement to drinking water. We will enhance international cooperation on water ecological protection, agricultural pollution prevention and control, water environment monitoring early-warning and water treatment technology and equipment. (This initiative is guided by the Ministry of Science and Technology and attended by the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Land and Resources, the Ministry of Environmental Protection, the Ministry of Housing and Urban-Rural Development, the Ministry of Water Resources, the Ministry of Agriculture and the Population and Family Planning Commission.)

(13) Making utmost effort to develop environmental protection industry. We will regulate the market of environmental protection industry. We will sort out laws, regulations and rules concerning market entry and business standards, and abolish behaviors that prevent the development of a uniform market and hinder fair competition. We will improve management measures and technical standards in areas of engineering design, construction and operation, promote advanced water-saving, pollution-treatment and restoration technology and facilitate the commercialization of equipment. (This initiative is guided by the National Development and Reform Commission and attended by the Ministry of Science and Technology, the Ministry of Industry and Information Technology, the Ministry of Finance, the Ministry of Environmental Protection, the Ministry of Housing and Urban-Rural Development, the Ministry of Water Resources, and the National Oceanic Administration.)

Accelerating development of environmental protection services business. We will clarify the duties and obligations of supervision departments, polluters and environmental protection service providers, and optimize the mechanisms for risk-sharing and performance guarantee. We will encourage an overall contract pattern that incorporates system design, complete equipment, engineering construction, commissioning, operating, maintenance and management, and a pattern featuring capital co-operation between the government and the society. We will focus on wastewater and garbage disposal and industrial parks, and promote third-party environmental pollution treatment. (This initiative is guided by the National Development and Reform Commission and the Ministry of Finance, and attended by the Ministry of Science and Technology, the Ministry of Industry and Information Technology, the Ministry of Environmental Protection and the Ministry of Housing and Urban-Rural Development.)

## **5. Giving full play to the role of market mechanisms**

(14) Getting prices and taxes in order. We will accelerate reform on water price. The multi-tier pricing system should be implemented in cities at county level or higher by the end of 2015 and promoted in designated towns with proper

conditions By 2020, we will fully implement a multi-tier pricing system for excessive use of non-household water. (This initiative is guided by the National Development and Reform Commission and attended by the Ministry of Finance, the Ministry of Housing and Urban-Rural Development, the Ministry of Water Resources and the Ministry of Agriculture.)

Improving charging policies. We will improve levying and management rules on wastewater treatment fees, waste disposal fees and water resource fees, raise charging standards to make the policies more comprehensive. The standard of wastewater treatment fees should be no lower than the disposal cost of wastewater and sludge. The charging standards for ground water should be higher than that for surface water; the standards for ground water in overload areas should be higher than that in ordinary areas. (This initiative is guided by the National Development and Reform Commission and the Ministry of Finance, and attended by the Ministry of Environmental Protection, the Ministry of Housing and Urban-Rural Development and the Ministry of Water Resources.)

Improving tax policies. We will implement preferential tax policies in terms of environmental protection, energy and water conservation and comprehensive resource utilization. Necessary key spare parts and raw materials imported for producing large environmental protection facilities will be exempt from tariffs. We will accelerate the legislation of environment protection tax and the reform of resource tax. Some energy-intensive and highly-polluting products will be included in the scope of consumption tax. (This initiative is guided by the Ministry of Finance and the State Administration of Taxation, and attended by the National Development and Reform Commission, the Ministry of Industry and Information Technology, the Ministry of Commerce, the General Administration of Customs and the State Quality Inspection Administration.)

(15) Promoting multiple financing and guiding private capital investment. We will actively promote the establishment of financing guarantee funds and the financing and leasing of environmental protection facilities. We will promote financing pledges of stock rights, usufruct, franchise rights and emission rights. We will take various measures such as providing environmental performance contract services and granting development and management rights to encourage private capital investment in water environmental protection. (This initiative is guided by the People's Bank of China, the National Development and Reform Commission and the Ministry of Finance, and attended by the Ministry of Environmental Protection, the Ministry of Housing and Urban-Rural Development, the CBRC, the CSRC and the CIRC.)

Increasing government investment. The state financial sector will enhance support to water environmental protection projects in the charge of the central government, and undertake some water environmental protection projects in the charge of both the central and local governments, with policies inclined to less-developed and key areas. We will adopt special transfer payment and replace subsidies with rewards. Local governments at all levels should give special support to wastewater treatment, sludge disposal, channel dredging, drinking water source protection, livestock breed pollution prevention, water ecological restoration and emergency clean-up projects. They should provide necessary guarantee for environmental monitoring capacity building and operation fee grading. (This initiative is guided by the Ministry of Finance and attended by the National Development and Reform Commission and the Ministry of Environmental Protection.)

(16) Establishing of incentive mechanisms. We will develop a guiding system for water conservation and environmental protection. We will encourage leading enterprises in energy conservation and emission reduction to raise the standard of water efficiency and discharge intensity, and support them to demonstrate cleaner production, water conservation and pollution treatment. (This initiative is guided by the National Development and Reform Commission and attended by the Ministry of Industry and Information Technology, the Ministry of Finance, the Ministry of Environmental Protection, the Ministry of Housing and Urban-Rural Development and the Ministry of Water Resources.)

Implementing green credit. We will give play to policy banks in water environmental protection, attach importance to fields such as circular economy, wastewater treatment, water resource conservation, water ecological environmental protection and clean and renewable energy utilization, and strictly limit the credit of enterprises infringing upon environmental laws. We will enhance the environmental credit system, develop an incentive and punishment system, strengthen cooperation among the environmental protection sector, the banking sector, the security sector and the insurance sector, and establish an environmental credit assessment system by 2017. We will encourage enterprises engaging in heavy metal industry, petrochemical industry and dangerous chemical transportation industry to buy environmental pollution liability insurance. (This initiative is guided by the People's bank of China and attended by the Ministry of Industry and Information Technology, the Ministry of Environmental Protection, the Ministry of Water Resources, the CBRC, the CSRC and the CIRC)

Implementing trans-boundary water environmental compensation. We will adopt measures, such as parallel capital subsidies, partner assistance and industrial transfer, to establish a trans-boundary water environmental compensation system and set up compensation pilot projects. We will also push forward our work on paying for the use and trading of pollution emission rights. (This initiative is guided by the Ministry of Finance and attended by the National Development and Reform Commission, the Ministry of Environmental Protection and the Ministry of Water Resources.)

## **6. Intensifying environmental law enforcement and regulation**

(17) Improving Regulations and Standards. We should improve laws and regulations. We should also accelerate making and amending laws and regulations with regard to water pollution prevention, ocean environmental protection, pollution emission permission, and chemical environmental management. We should research and make laws and regulations on environmental quality target management, environmental function zoning, water reservation and recycling, potable water source protection, pollution responsibility insurance, water function zoning supervision and management, groundwater management, environmental monitoring, eco-flow guarantee, and boat and land-borne pollution prevention. We should also, based on local realities, make plans to prevent local water pollution. (Legal offices should lead the initiatives, in which National Development and Reform Committee, Ministry of Industry and Information Technology, Ministry of Land Resources, Ministry of Environmental Protection, Ministry of Housing and Urban Construction, Ministry of Transport, Ministry of Water Resources, Ministry of Agriculture, National Health and Family Planning Commission, China Insurance Regulatory Commission, and State Oceanic Administration should



participate.)

We should improve the standard system. We should make and amend environmental quality standards on groundwater, surface water and ocean and pollutant emission standards on urban sewage treatment, mud disposal and water left after irrigation. We should also improve index system on water pollutant specific emission limit value of major industries, pollution prevention technology policies and clean production evaluation. All localities should make local water pollutant emission standard that is stricter than national standards. (Ministry of Environmental Protection should lead these initiatives, in which National Development and Reform Committee, Ministry of Industry and Information Technology, Ministry of Land Resources, Ministry of Housing and Urban Construction, Ministry of Water Resources, Ministry of Agriculture, General Administration of Quality Supervision, Inspection and Quarantine should participate.)

(18) We should reinforce law enforcement. All polluting units should emit pollutants according to laws. We should screen pollution situation of industrial enterprises one by one: to those enterprises that meet emission standards, we should take measures to ensure future compliance; to those enterprises that exceed specific standards or total volume standards, we should warn them with a yellow card and restrict or stop their production so that they can rectify their non-compliance; to those enterprises that still do not meet standards after emission rectification and commit serious standard violation, we should warn them with a red card and stop their production or put them out of business. After 2016, we should publish a list of enterprises that are warned with yellow cards or red cards. We should make selective examination over polluting units about their compliance with emission standards and publish the results. (The Ministry of Environmental Protection should be responsible for this initiative.)

We should improve environmental supervision and law-enforcement mechanism of national supervision, provincial inspection tours, and local inspection. We should strengthen the cooperation between ministry and units responsible for environmental protection, public security and supervision and improve the coordinating mechanism between administrative law enforcement and criminal judiciary. We should improve regulations on case transfer, acceptance, registration and notification. We should intensify the supervision over local people's government and related authorities on their environmental protection work. We should also research and make national environmental supervision commissioner system. (The Ministry of Environmental Protection should lead the initiative, in which Ministry of Industry and Information Technology, Ministry of Public Security and State Commission Office of Public Sectors Reform should participate.)

We should crack down on violations against environmental laws. We should mainly crack down on non-compliance including pipe drainage, emission of water containing toxicant and pathogens through leaching well, leaching pit and karst caves, faking monitoring data, misuse of water pollutant treatment plants, and unapproved demolition or idling of water pollutant treatment plants. To those responsible for ecological damages we should implement compensation mechanism. We should also severely punish non-compliance in environmental influence evaluation of construction projects, including authorities approving projects out of their jurisdiction, construction prior to or during approval procedure, and prolonged test run before authorities' acceptance and approval. For non-compliances that

constitute crimes, we should file the case to criminal court. (The Ministry of Environmental Protection should lead the initiative, in which Ministry of Public Security and Ministry of Housing and Urban Construction should participate.)

(19) Improving supervision and regulation. We should improve the coordination mechanism between different watersheds. We should improve the negotiation coordination mechanism on cross-border, cross-watershed, cross-zone, and cross-sea water environment protection. We should give full play to the role of supervision agencies and water resource protection agencies in environmental protection zone and watersheds and explore an ecological protection and restoration mechanism that unifies the land and the sea. Different local governments and departments in both upstream and downstream area should strengthen coordination and periodical consultation and implement joint supervision, joint law-enforcement, joint emergency response and information sharing. Beijing, Tianjin city and Hebei province, Long River Delta area and Pearl River Delta area should establish a coordination mechanism to prevent water pollution before the end of 2015. We should also establish a strict water environment protection management system to regulate the emission of pollutants. (The Ministry of Environmental Protection should lead the initiative, in which the Ministry of Transport, Ministry of Water Resources, Ministry of Agriculture and State Oceanic Administration should participate.)

We should improve the network to monitor water environment. We should make unified plans to designate monitoring sections (spots). We should strengthen technological support for drinking water resource quality all-index supervision, aquatic organism monitoring, groundwater environment monitoring, chemical monitoring and environment risk prevention technology. We should build a monitoring network for water environment that unifies areas and seas including Beijing, Tianjin, Hebei province, Long River Delta area and Pearl River Delta area. (The Ministry of Environmental Protection should lead the initiative, in which National Development and Reform Committee, Ministry of Land Resources, Ministry of Housing and Urban Construction, Ministry of Water Resources, Ministry of Transport, Ministry of Water Resources, Ministry of Agriculture, and State Oceanic Administration should participate.)

We should build up our capacity to monitor environment. We should strengthen professional skill training on environmental monitoring, environmental inspection and environmental emergency response and put in place a system that qualifies law-enforcement and monitoring personnel with certificates. We should build stronger law-enforcement teams on grassroots level and equip qualified towns, townships (streets) and industrial parks with necessary environmental supervision forces. All cities and counties should divide their jurisdiction into different sections in environmental regulation from 2016. (The Ministry of Environmental Protection is responsible for this initiative.)

## **7. Strengthening water environment management**

(20) Strengthening environment quality target management. We should clarify protection targets for the quality of different water bodies and confirm whether standards have been met in all the water bodies. For areas in which water quality does not meet the standard, local authorities should make plans to meet the standards and allocate treatment tasks to polluting units in catchment areas. We should also clarify prevention measures and compliance deadlines,

file prevention and treatment plans to the superior people's government and publish the plans after 2016. Superior authorities should supervise the treatment of water bodies that do not meet the standards and, when necessary, restrict the quotas of approval in related region. (The Ministry of Environmental Protection should lead the initiative, in which the Ministry of Water Resources should participate.)

(21) Tightening control over the total volume of pollutant emission. We should improve the statistics and monitoring system of pollutants and include all polluting resources into our investigation, including pollutants from industries, urban households, agriculture, and moving polluting resources. We should select pollutant indexes that have major bearings on water environment, including total nitrogen, total phosphorus and heavy metals, and include those indexes into a restraining index system to control the total emission volume into watersheds and areas. (The Ministry of Environmental Protection should lead the initiative, in which National Development and Reform Commission, Ministry of Industry and Information Technology, Ministry of Housing and Urban Construction, Ministry of Water Resources and Ministry of Agriculture should participate.)

(22) Strictly controlling environmental risks. We should prevent environmental risks. We should assess the environmental and public health risk caused by industrial enterprises and industrial clusters along reservoirs. We should implement prevention and control measures. We should assess the environmental and public health risks associated with current chemicals and publish a list of chemicals that shall be controlled first before the end of 2017. We should strictly control and, gradually phase out the production and use of high-risk chemicals. (The Ministry of Environmental Protection should lead the initiative, in which Ministry of Industry and Information Technology, National Health and Family Planning Commission and State Administration of Work Safety should participate.)

We should properly deal with water pollution emergencies. People's governments at all levels should make and improve a contingency plan to deal with water pollution emergencies and clarify different parties' responsibility. We should clarify pre-warning, forecasting and responding procedures and emergency dealing and safeguard measures. We should publish pre-warning information in accordance with the law. (Ministry of Environmental Protection should lead the initiative, in which Ministry of Housing and Urban Construction, Ministry of Water Resources, Ministry of Agriculture and National Health and Family Planning Commission should participate.)

(23) Comprehensively implementing pollution permission system. We should issue pollution permits in accordance with the law. By the end of 2015, we should put in place the pollution permit trade system in national major pollution source region and finish the issuance of pollution permits in permit trade pilot region. The above-mentioned work should be completed for other pollution sources before 2017. (The Ministry of Environmental Protection should be responsible for this initiative.)

We should strengthen the management over permits. With improving water quality and preventing environmental risks as our targets, we should include pollutant varieties, density, total volume, and emission direction into the management range of permits. Unlicensed pollutant emission or unpermitted emission is prohibited. We should strengthen the regulation on offshore pollutant emission into and explore and make a permit system for

offshore pollutant emission. We should complete the construction of information platform for national emission permit management. (The Ministry of Environmental Protection should lead the initiative, in which State Oceanic Administration should participate.)

## **8. Ensuring the safety of aquatic ecological environment**

24) Ensuring the safety of drinking water sources. We should ensure the safety of drinking water from the water sources to water taps. People's government and water supply units at all levels should periodically monitor, inspect and assess the safety of drinking water sources, water supply plants and drinking water quality from home water taps within their jurisdiction. Cities above prefecture level should publish related information after 2016. From 2018, governments above county level should publish information about drinking water. (The Ministry of Environmental Protection should lead the initiative, in which National Development and Reform Commission, Ministry of Finance, Ministry of Housing and Urban Construction, Ministry of Water Resources.)

Providing stronger protection for drinking water sources. We should standardize drinking water sources and demolish illegal buildings and drain outlets within drinking water sources protection zones. Cities above prefecture-level with single water sources should complete the construction of spare water source or emergency water source before the end of 2020. Localities with proper conditions can complete the construction ahead of schedule. We should also strengthen the protection of rural drinking water and water quality monitoring. (The Ministry of Environmental Protection should lead the initiative, in which National Development and Reform Commission, Ministry of Finance, Ministry of Housing and Urban Construction, Ministry of Water Resources and National Health and Family Planning Commission should participate.)

Preventing and treating groundwater pollution. We should periodically investigate and assess the environment in centralized drinking groundwater source supply area. Seepage prevention should be carried out in enterprises and industrial parks that produce and store petroleum and chemicals, mining areas and landfills. Underground oil tanks of gas stations should be upgraded by installing double-deck tanks or anti-seepage ponds before the end of 2017. Deserted mining well, drilling well and water well should be sealed and refilled. Beijing, Tianjin and Hebei province should also publish a list of places in which underground water pollution threatens public health and run restoration pilot projects. (The Ministry of Environmental Protection should lead the initiative, in which Ministry of Finance, Ministry of Land Resources, Ministry of Housing and Urban Construction, Ministry of Water Resources and Ministry of Finance should participate.)

(25) Focusing on the treatment and prevention of pollution in major watersheds. We should formulate a plan to treat and prevent water pollution in seven major watersheds. We should explore and establish a function zoning system to manage aquatic ecological environment. We should also take more targeted measures to treat COD, ammonium, nitrogen, total phosphorus, heavy metals and other indexes that influence human health. Total nitrogen emission control should be applied on rivers that flow into eutrophic reservoirs. By 2020, the general water quality of Long River and Pearl River should reach the good level, the quality of slightly polluted Songhua River, Yellow River, Huai River and

Liao River should be improved and the pollution in seas and rivers should be alleviated. The water quality of Three Gorges project should remain good and water transfer project that conducts water from the south to the north and from Luan River to Tianjin city should guarantee water safety. The eutrophic Tai Lake, Chao Lake and Dian Pond should be improved. The pollution in Baiyangdian, Wuliangsu Sea, Hulun Lake and Aibi Lake should be alleviated. Regions with small environmental capacity, fragile ecological environment and high environmental risks should be subject to specific emission limit value of water pollutants. All localities can widen the application of the above-mentioned limit value according to actual needs to improve aquatic environment. (The Ministry of Environmental Protection should lead the initiative, in which National Development and Reform Commission, Ministry of Industry and Information Technology, Ministry of Finance, Ministry of Housing and Urban Construction and Ministry of Water Resources should participate.)

Protecting good-quality water bodies. We should carry out comprehensive ecological environmental safety assessment over river and lake reservoirs in which headstream water and current water reach or exceed III Class quality and implement a plan to protect ecological environment. The above-mentioned work in East River, Luan River, Qiandao Lake and Nansi Lake should be completed before the end of 2017. The water quality of rivers in Zhejiang and Fujian Provinces, southeast rivers, northwest rivers and cross-border water bodies should remain stable. (The Ministry of Environmental Protection should lead the initiative, in which Ministry of Foreign Affairs, National Development and Reform Commission, Ministry of Finance, Ministry of Water Resources and State Forestry Administration should participate.)

(26) Shoring up protection for costal environment. We should implement pollution treatment and prevention plans in costal areas. The focus is Yellow River estuary, Long River estuary, Min River estuary, Pearl River estuary, Liaodong Bay, Bohai Bay, Jiaozhou Bay, Hangzhou Bay and North Bay. We should impose control of total nitrogen emission on cities above prefecture level. We should also establish a system to control total emission into major seas. We should standardize the installment of emission outlets to seas. By the end of 2017 we should eliminate all the illegal and improper emission outlets to seas. By 2020 all the rivers that lead to seas in costal provinces (regions, cities) should at least meet the V standard. We will also raise the threshold for all the sea-related projects. (The Ministry of Environmental Protection and State Oceanic Administration should lead the initiative, in which National Development and Reform Commission, Ministry of Industry and Information Technology, Ministry of Finance, Ministry of Housing and Urban Construction, Ministry of Transport and Ministry of Agriculture should participate.)

Promoting environment-friendly aquaculture. We should define aquaculture-free area around major rivers, lakes and costal areas. We should renovate fishponds and costal fish raising cages in a standardized fashion and encourage qualified aquaculture enterprises to carry out offshore aquaculture and intensive aquaculture. We should promote the use of artificially formulated feed and phase out the use of frozen small fish as feed. We should strengthen the management of feed input and standardize and strict the use of antibiotics according to the law. We should implement specific inspection in this regard. By 2015 we will stabilize the area of sea aquaculture at 2.2 million acres. (The Ministry of Agriculture is responsible for this initiative.)

Strictly containing the pollution caused by environmental endocrine-like chemicals. We should finish the investigation

into the use of such chemicals by the end of 2017 and monitor the risks in water sources, agricultural planting areas and centralized aquaculture areas. We should also make measures to eliminate, restrict and supplement such chemicals. (The Ministry of Environmental Protection should lead the initiative, in which the Ministry of Industry and Information Technology and Ministry of Agriculture should participate.)

(27) Treating urban black and stinky water. We should take measures to control emission sources, clean garbage, dredge up tunnels and restore ecological environment and take stronger measures to treat black and stinky water. We should publish the results of treatment every half year. The non-agricultural zones in cities above prefecture level should finish water screening before the end of 2015 and publish the name of black and stinky water bodies and responsible person and compliance deadline; By the end of 2017, we will clean out all the large-scale floating rubbish in rivers, clean out all the garbage on river banks and close all the illegal emission outlets; By the end of 2020 we will achieve the targets on treating black and stinky water bodies. Non-agricultural zones in municipalities, provincial capitals and economic development priority cities should eradicate black and stinky water bodies by the end of 2017. (The Ministry of Housing and Urban Construction should lead the initiative, in which Ministry of Environmental Protection, Ministry of Water Resources and Ministry of Agriculture should participate.)

(28) Protecting river and wetland ecological system. We should protect ecological environment in rivers and scientifically draw a red line to protect ecological environment. We should prohibit the encroachment on water reservation areas including natural wetlands and set a deadline to restore the already encroached areas. We should improve the construction and protection of water reservation forests, protect and restore wetlands and restore more farmlands to forests, grasslands and wetlands. We should improve the ecological construction of river (lake) belt and install plant buffer belt and isolation belt on riverbanks. We should also provide more protection for the natural protection zone of aquatic wild plants and animals and for protection zone of quality aquatic creature resources. We should also protect the current area and host area of endangered aquatic creatures and important quality aquatic creatures. We should improve the diversity of aquatic organisms. By the end of 2017 we should make a plan to protect the diversity of aquatic creatures in seven major watersheds. (The Ministry of Environmental Protection and State Forestry Administration should lead the initiative, in which Ministry of Finance, Ministry of Land Resources, Ministry of Housing and Urban Construction, Ministry of Water Resources and Ministry of Agriculture should participate.)

Protecting ocean ecology. We should protect typical ecological system in coastal wetlands, estuaries and bays including mangrove forests, coral reefs and sea-grass beds and major fishing areas including spawning area, procreation area, hibernation area and migrating areas. We should release fries back to seas and rivers and build artificial fish reefs. We should study marine ecological restoration and compensation and restore marine ecological environment. We should implement a regulation plan on transforming seas to farmlands and impose strict management and supervision in this regard. It is prohibited to transform sea into lands in the core and buffer area of major bays, marine natural protection area, major protection area and preservation area of marine special protection zone, major estuary areas, major coastal wetlands, major chiltern coastlines, sand-borne protection sea areas, special protection islands and major fishing areas. It is restricted to transform sea into lands in ecological fragile zones and marine areas which has low self-cleansing capacity. In case of illegal transformation from sea to lands, we will hold responsible persons accountable.

We should include the protection of natural coastlines into the assessment of coastal city governments' performance. By 2020 the retention rate of national natural coastlines cannot be below 35% (excluding island's coastline). (The Ministry of Environmental Protection and State Oceanic Administration should lead the initiative, in which National Development and Reform Commission, Ministry of Finance, Ministry of Agriculture and State Forestry Administration should participate.)

## **9. Clarifying the responsibility of different parties**

(29) Strengthening local government's responsibility to protect aquatic environment. People's governments at all levels play the major role in implementing this plan and should formulate and publish a work plan to treat water pollution by the end of 2015. They should identify major tasks and annual targets for different watersheds, regions and industries. We should continuously improve policies and measures, increase capital input, coordinate the treatment of urban and rural water pollution, improve regulation and guarantee the completion of all tasks. All provinces (zones, cities) should file their work plans to the State Council. (The Ministry of Environmental Protection should lead the initiative, in which National Development and Reform Commission, Ministry of Finance, Ministry of Housing and Urban Construction and Ministry of Water Resources should participate.)

(30) Strengthening coordination between different authorities. We should establish a national mechanism to coordinate water pollution treatment and prevention and make solutions to major problems periodically. We should divide duties among different authorities and carry out water pollution prevention and treatment. The Ministry of Environmental Protections should play a better role in leading, coordinating and supervising and report work progress to the State Council in a timely fashion. (The Ministry of Environmental Protection should lead the initiative, in which National Development and Reform Commission, Ministry of Technology, Ministry of Industry and Information Technology, Ministry of Finance, Ministry of Housing and Urban Construction, Ministry of Agriculture and State Oceanic Administration should participate.)

(31) All emitting units should shoulder their responsibility. All emitting units should abide by environmental laws, regulations and rules, build pollution treatment facilities and manage their operation. They should carry out self-inspection and discharge their responsibility to treat pollution, reduce emission and prevent risks. Enterprises affiliated with ministries and other SOEs should play the leading role in discharging the above-mentioned responsibilities. Enterprises within industrial cluster zone should explore and establish a self-discipline mechanism for environmental protection. (The Ministry of Environmental Protection should lead the initiative, in which State-owned Asset Supervision and Administration Commission should participate.)

(32) Improving target task assessment. The State Council and People's Governments in all provinces (zones and cities) should sign a responsibility document that clarifies the targets in water pollution treatment and prevention. In so doing, they can divide the tasks among different authorities and implement a "one post two responsibilities" mechanism. We will assess the progress in implementing the action plan in different watersheds, regions and seas and publish the results of assessment that will be used as criteria in comprehensively evaluating leading teams and leaders.

The results of assessment will be used as a reference to allocate funds earmarked to treat and prevent pollutions. (The Ministry of Finance and National Development and Reform Commission should lead the initiative, in which the Ministry of Environmental Protection should participate.)

For governments that do not pass annual assessments: we should warn the responsible persons in provincial government and related authorities, propose rectification measures and urge them to achieve compliance; and we should withhold Environmental Assessment approvals for construction projects of related areas and enterprises. In case of water pollution caused by dereliction, data forging and faking, and uncompleted annual targets, we should hold responsible persons or units accountable according to laws and disciplines. In case of blind decisions made by leaders without considering ecological environment, which leads to the deterioration of aquatic environment and other severe consequences, we should file the name of the responsible leaders and punish them in accordance with laws and party disciplines according to the degree of the mistake. Those responsible leaders who have already left the duty shall also be held accountable. (Ministry of Environmental Protection should lead the initiative, in which Ministry of Supervision should participate.)

## **10. Strengthening public participation and social supervision**

(33) Revealing environmental information according to laws. Central government publish a list of 10 worst cities and 10 best cities in terms of aquatic environment and the situation of aquatic environment in all provinces (cities, districts). For cities with bad aquatic environment that still do not meet the requirements after rectification, we will rescind their honorary titles including Environmental Protection Model City, Eco-civilization Demonstration Area, Water-preserving City, Garden City and Clean City and reveal their names to the general public.

People's governments of all provinces (districts, cities) should publish the status of aquatic environment of all prefecture-level cities (Zhou, Meng) within their jurisdiction. National major emitting units should publish major pollutants' names, emission methods, emission density and total volume and situation of excessive emission and the information about the construction and operation of pollution treatment and prevention plants. They should also accept supervision from the public. They should publish information about environment-friendly index of industrial cluster areas, pollutant emission intensity of major industries and environment-friendly index of cities. (The Ministry of Environmental Protection should lead the initiative, in which National Development and Reform Commission and Ministry of Industry and Information Technology should participate.)

(34) Strengthening public supervision. We should provide training and consultation on water pollution prevention laws to the public and society and invite people to participate in environmental law enforcement and investigation into water pollution cases. We will reveal typical violations against environmental law. We will improve the whistle blowing system and use hotline "12369" as a whistle blowing channel and Internet platform. We will deal with environmental complaints from the public within the deadline and if complained problems prove to be real, we will award the whistle-blower. We will solicit public opinions on major decisions and construction projects through public hearings and the Internet. We will facilitate lawsuits about environmental issues. (The Ministry of Environmental Protection is



responsible for this initiative.)

(35) We should establish a framework of participatory campaign. The principle that “saving water and keeping water clean are a shared responsibility for all” should be upheld. We should strengthen publicity and education, such as including the knowledge of water resource, water environment protection and water conditions in national education system so as to make the public better aware of the relationship between socioeconomic development and environment conservation. The eco-friendly experience campaigns should be promoted in society experience bases such as national water-saving education of primary and middle schools, education of water and soil conservation and environment education. We should also support the work of the environmentalist NGOs and volunteers. The new trend of “green consumption” should be encouraged and innovative public activities of eco-friendly communities, schools and families should be conducted. We should also contribute to saving water by encouraging the purchase of water-saving and eco-friendly products. (The Ministry of Environmental Protection should lead the initiative, in which the Ministry of Education, Ministry of Housing and Urban Construction and Ministry of Water Resources should participate.)

As China is witnessing rapid development in new industrialization, informatization, urbanization and agricultural modernization, the prevention and treatment of water pollution remain a demanding task for us. Localities and regulatory authorities should coordinate socioeconomic development with environment protection with concrete action. Specifically, we should clarify the law enforcement subject and accountability subject according to the requirement that “localities fulfill responsibilities within their jurisdiction and regulatory departments strengthen industry management”. Consequently, all the government departments involved can carry out respective duties to the fullest extent. We should clarify our priorities, make comprehensive treatment and be practical; we should take decisive and thorough measures to implement this plan to ensure the timely achievement of targets for national aquatic environment treatment and protection. In so doing, we can realize our target of “Two Hundred-Year” and make contribution to realizing the Chinese Dream, which is the great renewal of the Chinese nation.



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A project funded by the European Union  
本项目由欧盟资助