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Mid-term Assessment Report of the 13th Five- Year Plan for the Protection of Ecological Environment



Foreword »

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Since its opening-up and reform, China has been in the process of rapid economic development with its people enjoying an increasingly improved standard of life. Meanwhile accompanying this dramatic economic growth is the degradation of environment which has, to some extent, damaged the gains of the opening-up and reform and prevented the economy from healthy and sustainable development. The Chinese government is increasingly aware of that without addressing the environmental issues it is facing now, it will jeopardize its long-term goal of the great rejuvenation of the Chinese nation. Given the magnitude and complexity of the environmental issues in China, there is no easy way in addressing them and the solution to them entails an equal priority being given to environmental protection, ecological conservation and economic development or even higher than the latter by mainstreaming the former into the overall socio-economic decision-making

process. As a matter of fact, China has been in the struggle against environmental pollution since the very beginning of its economic take-off and trying to explore a pathway that could help address China's environmental issues in the way most suitable to China's specific circumstances.

In recent years, especially since the 12th Five-Year Plan period, the enhanced measures including legislation, policy, regulatory and economic means have been taken by the Chinese government in dealing with environmental problems, of which environmental policies have played an important role in this regard. China has established Xi Jinping's ecological civilization thought, with the concept of green development deeply rooted in the hearts of Chinese people, and now is moving towards the goal of Beautiful China by 2050.

Corresponding to this situation and in

meeting the demand of governments at different levels for environmental policy tools, the environmental policy research projects on topics of a wide range have been conducted by some Chinese environmental research institutions including the Chinese Academy of Environmental Planning (CAEP).

CAEP founded in 2001, is a research advisory body supporting governments in the development of key environmental planning, national environmental policies, and major environmental engineering projects. In the past more than 10 years, CAEP has accomplished the development of the overall planning of national environmental protection for the 10th, 11th, 12th and 13th Five-Year Plan periods; water pollution prevention and control planning for key river basins; air pollution prevention and control planning for key regions; soil pollution prevention and control planning; and some regional environmental protection plans. We are now engaged in national eco-environmental protection plan for the 14th Five-Year Plan. In the same period of time, CAEP also actively engaged in research on such topics as green GDP, environmental taxation, emission trading, ecological compensation, green financing, etc. By undertaking these activities, CAEP has become an indispensable advisory body in environmental decision-making in mainland China. According to the *2019 Global Go To Think Tank Index Report* published by the University of Pennsylvania, CAEP was ranked 25 in the

field of Environment Policy in the world. Many of CAEP's research results and project outcomes regarding environmental policies have drawn great attention of decision makers and international institutions, and have been utilized to contribute to the formulation of national environmental policies concerned.

The Chinese Environmental Policy Research Working Paper (CEPRWP) is a new internal publication produced by CAEP to facilitate the academic exchange with foreign colleagues in this field, in which the selected research papers on environmental policies from CAEP are set out on the irregular basis. It is expected that this publication will not only make CAEP's research results on environmental policies be known by foreign colleagues but also serve as a catalyst for creating an opportunity of international cooperation in the field of environmental policies, and environmental economics in particular, with a view of both the academic research and practical policy needs.

The Mid-term Assessment Report of the 13th Five-Year Plan for the Protection of Ecological Environment was issued by the Ministry of Ecology and Environment (MEE) and translated by CAEP. The report lists the completion of targets and the progress in main tasks of the *13th Five-Year Plan for the Protection of Ecological Environment (the Plan)* by the end of 2018 and summarizes the main practice, challenges and the next step of *the plan*. The report shows that it was progressing well, and 22 main targets in

the plan had attained sequential progresses. Since the implementation of *the Plan*, the environmental quality has improved significantly, the average fine particle concentration in cities at prefecture-level or above failing to meet the standard was $43 \mu\text{g} / \text{m}^3$ in 2018, a decrease of 24.6% compared with 2015. While making achievements, *the Plan* also faces many challenges, such as the imbalance of urban and rural ecological environment governance and insufficient investment in ecological environment governance. The issuance of the assessment report helps to understand the progress of

the Plan, summarize the challenges in the implementation of *the Plan*, and lay a good foundation for the further implementation of *the Plan*.

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1. BACKGROUND CONTEXT

The 13th Five-Year Plan (here in after referred to as FYP) period is decisive for China in achieving a moderately prosperous society in all aspects. In this process, China is faced with a severe situation of environmental protection, as the ecological environment has a large gap compared with the eager expectations of the people, which has become a prominent weak link in achieving a moderately prosperous society in all aspects. Promoting the construction of ecological civilization and overcoming the weak link of ecological environment are inevitable requirements for a moderately prosperous society in all aspects. During the 13th FYP period, China is at the stage of superposed development of industrialization, urbanization and agricultural modernization, with outstanding contradictions between ecological environmental protection and economic development, which has brought many challenges to ecological environmental protection. Meanwhile, China has been advancing in-depth comprehensive reforms and law-based governance, restructured and upgraded economy, accelerated supply-side structural reform, constantly improved the public awareness of ecological environmental protection, and constantly enhanced its participation in global environmental governance, which has created favorable conditions for China's ecological environment protection. In this

context, the State Council of China issued the *13th Five-Year Plan for the Protection of Ecological Environment* in November 2016, which is designed to achieve the goal of overall improvement of the ecological environment quality by 2020 through the implementation of the *Plan*, address the outstanding issues in the field of ecological environment and provide more high-quality ecological products to the people. The *Plan* has specified the main objectives, guiding ideologies, key tasks and guarantee measures for China's ecological environmental protection during the 13th FYP period, and put forward 22 main targets, with 9 obligatory targets and 13 anticipatory targets. According to the requirements of the *Plan*, the Ministry of Ecology and Environment (MEE) of China has worked with relevant departments in conducting the mid-term assessment of the implementation of the *13th Five-Year Plan for the Protection of Ecological Environment*. The Chinese Academy of Environmental Planning (CAEP) has refined and summarized the key contents of the mid-term assessment report and annotated certain concepts. The following are the main contents of the mid-term assessment report issued by MEE. The figures and tables in this report were added by the editor. This is not an official translation of the Chinese original and is published for reader's reference only.



2. OVERALL PROGRESS FOR THE IMPLEMENTATION OF THE PLAN

All regions and departments have thoroughly put into practice Xi Jinping's thought on ecological civilization, conscientiously carried out the decisions and plans of the CPC Central Committee and the State Council, put the improvement of quality of the ecological environment at the core, secured solid progress in the critical battle of pollution, coordinated the high-quality economic development and high-level protection of the ecological environment, and pushed forward smoothly the goals and tasks stipulated in the *Plan*.

2.1 Completion of Targets

The *Plan* has put forward 22 main targets, with 9 obligatory targets and 13 anticipatory targets. 22 main targets had attained sequential progresses while certain individual targets had been completed ahead of schedule by the end of 2018.

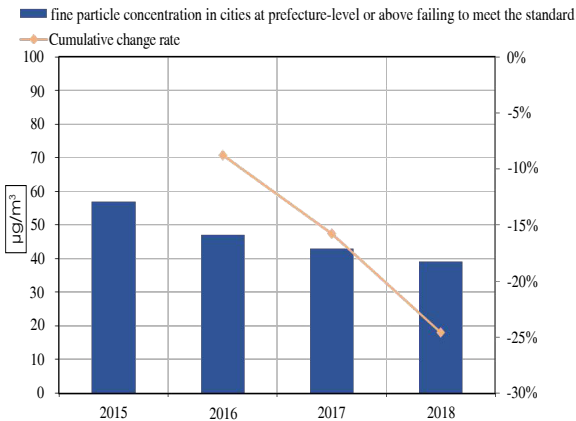
Environmental quality has improved significantly. In 2018, the proportion of days with good air quality in 338 cities at prefecture-level and above in the country (including Laiwu City which was merged into Jinan City in January 2019; same as below) was 79.3%, an increase of 2.6% from 2015 (Figure 1); the average fine particle ($PM_{2.5}$) concentration in cities at prefecture-level or above failing to meet the standard was $43 \mu g / m^3$, a decrease of 24.6% compared with 2015 (Figure 2); according to the assessment of 1940 national surface water assessment sections, the proportion of Grade I-III sections was 71.0% while that of worse than Grade V sections was 6.7% (Figure 3); the proportion of coastal waters with excellent and good water quality (I, II) in the country was 74.6% (Figure 4), both meeting or exceeding the expected progresses. The two targets of the safe utilization rate of contaminated farmland and of polluted land have progressed smoothly.

■ Figure 1. The air quality of 338 cities in 2015 and 2018



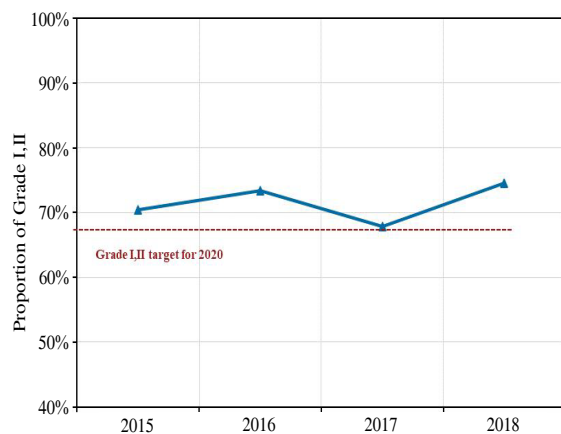


■ **Figure 2. Changes in fine particle concentration in cities at prefecture-level or above failing to meet the standard**



Date source: China National Environmental Monitoring Centre

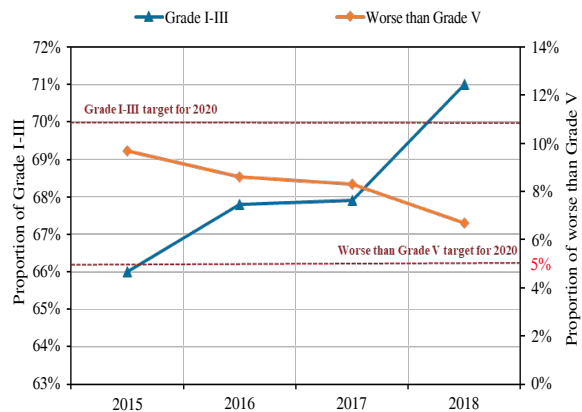
■ **Figure 4. Changes in coastal waters with excellent and good water quality (I, II)**



Date source: China National Environmental Monitoring Centre

Emissions of major pollutants have continued to decline. By the end of 2018, the total emissions of sulfur dioxide, nitrogen oxides, chemical oxygen demand

■ **Figure 3. Changes in water quality of national surface water assessment sections**



Date source: China National Environmental Monitoring Centre

Note: There were 970 monitoring sections in 2015 and 1940 monitoring sections since 2016

and ammonia nitrogen in the country had decreased by 18.9%, 13.1%, 8.5% and 8.9% respectively over 2015, which had all exceeded expected progresses.

Ecological construction has been progressing smoothly. In 2018, the national forest coverage rate was 22.96%, the forest stock volume was 17.56 billion m³ and the comprehensive vegetation coverage of grassland rate was 55.7%. The population of national key protected wildlife and plants remained stable in general. Over the past three years, a total of 66,300km² of areas had been completed the tasks of sand prevention and control and an additional 179,200 km² of areas had been under comprehensive soil and water erosion control.

2.2 Progress in Main Tasks

Various regions and departments



have vigorously advanced ecological environmental protection and the main tasks have been progressing smoothly.

2.2.1 Actively Consolidating the Foundation for Green Development

Strengthening ecological space management and control. The Beijing-Tianjin-Hebei region, Yangtze River Economic Belt (11 provinces) and Ningxia and Fifteen provinces (autonomous regions and municipalities directly under the central government) have initially identified the ecological-conservation red lines, and another 16 provinces (autonomous regions) have basically formed such demarcation plans. Work for compiling the technical specifications for ecological conservation red lines, environmental quality bottom lines, resource utilization ceilings and ecological environmental access list has been initiated.

Phase out backward and excess capacity. Two years ahead of schedule to complete the targets of cutting excess capacity in the coal and steel industry and for phasing out and shutting down backward coal-fired power units in the 13th five-year plan. Efforts have also been made to steadily promote the withdrawal and resolution of heavily polluted capacities in major water-related industries such as paper-making, leather-making, printing & dyeing and pesticides.

Conducting coordinated protection of the Beijing-Tianjin-Hebei region. Efforts have been made to constantly carry out the sandstorm source control ecological project and construction of ecological water source

protection forest in Beijing-Tianjin-Hebei region, organize and complete the mid- and long-term planning and researches on deepening air pollution control in the Beijing-Tianjin-Hebei region and the surrounding areas, and the *Standard of Content Limits of Volatile Organic Compounds in Architectural Paints and Adhesives* has been jointly released by Beijing, Tianjin and Hebei province.

Protecting the environment in the Yangtze River Economic Belt. Actions have been made such as investigation and rectification of sewage river inlets, cracking down on illegal environmental behaviors in the disposal of solid wastes, inspections on the protection and utilization of the main streams of the Yangtze River. 1304 of the 1308 issues enlisted in the *Solid Wastes Removal Action 2018* were addressed. Actions to improve waters with quality worse than Grade V have been initiated.

Strengthening green technology innovation. The central government has invested more than RMB14 billion yuan to implement key national R&D special projects such as Research on the Causes and Control Technologies of Air Pollution and Research on the Rehabilitation and Protection of Typical Fragile Ecosystems, as well as a batch of key ecological environmental technology projects such as Key Project of Water Pollution Control and Governance and Causes of Heavy Air Pollution and Governance.

Improving the environmental standard



system. Efforts have been made to compile and amend 2 eco-environmental quality standards, 24 pollutant discharge (control) standards, 194 eco-environment monitoring standards, 5 environmental basic standards and 133 eco-environmental management standards.

Strengthening international environmental cooperation. Efforts have been made to facilitate the UN Environment Programme in releasing the report entitled *Lucid waters and lush mountains are invaluable assets: China's Ecological Civilization Strategy and Action*, incorporate the Balance and Sustainable Cooperation Principles into the joint communiqué of the first Belt and Road International Cooperation Summit Forum and initiate the preparation of building the Belt and Road Green Development International Alliance.

2.2.2 Steadily Advancing Basic Public Services

Continuously improving the infrastructure. By the end of 2018, 4332 sewage treatment plants had been built and put into operation in cities and counties in the country, with a sewage treatment capacity of 195 million m³ per day. The building of sponge cities had achieved steady progress with 538 cities made their sponge city construction plan.

Promoting a comprehensive improvement of the rural environment. The central government has allocated RMB18 billion yuan for the protection of drinking water sources, domestic sewage and garbage treatment, livestock waste disposal and

resource utilization, and traditional village protection. Pesticides application in the three major food crops has registered negative growth for three consecutive years while the use of chemical fertilizers registered zero growth. The three-year action to improve the rural human settlement environment has been conducted.

Strengthening the ecological environment supervision capacity. The grid-based ecological environment supervision pattern featuring “territorial management, hierarchical responsibility, comprehensive coverage and clarified responsibility” has been initially shaped. The establishment of a national unified real-time automatic monitoring system for pollutant discharge units has been accelerated.

Improving the capability in monitoring the ecological environment. 1,436 state-controlled urban air monitoring stations have been built in 338 cities at the prefecture level and above. The Gaofen No. 5 environmental satellite has been launched. The power for monitoring national air and surface water environmental quality has been centralized. A three-level quality control system consisting of state-region-monitoring agencies has been constructed.

Enhancing the construction of information system. Big data application platforms such as the national soil environment information management platform and solid waste information management system have been built. The second national pollution source census has been earnestly pushed forward.



2.2.3 Remarkably Improving the Ambient Air Quality

Completing the tasks stipulated in the *Action Plan on Prevention and Control of Air Pollution*. Over 20 supportive policies for executing the *Action Plan on Prevention and Control of Air Pollution* have been released, and the objectives and key tasks for air quality improvement have been fully completed.

Improving the top-level design of air pollution prevention and control. Efforts have been made to release documents such as *Three-Year Action Plan for Keeping the Blue Sky*, *Three-year Action Plan for Promoting the Adjustment of Transport Structure (2018-2020)*, *Action Plan for Diesel Truck Pollution Control* and *Work Plan for Prevention and Control of Volatile Organic Compound Pollution During the 13th FYP Period*.

Intensifying the joint prevention and control mechanisms in key areas. The leading group for air pollution control in the Beijing-Tianjin-Hebei region and surrounding areas has been established, the coordination mechanism for air pollution prevention and control in Fenhe-Weihe Plain has been set up, and the coordination mechanism for air pollution prevention and control in the Yangtze River Delta region has been improved.

Conducting air pollution prevention and control in key areas. Efforts have been made to carry out strengthened supervision and fixed-point assistance in key areas of the blue sky protection campaign, strengthen the

comprehensive treatment of small, poorly-managed and heavily-polluting enterprises and clusters, orderly replace coal with electricity and gas, vigorously promote coal consumption reduction and substitution in key areas, and guide key regions to improve the list of emergency emission reduction in heavily polluted weathers.

Paying close attention to environmental management in key industries. A total of 810 million kilowatts of ultra-low emission retrofits has been completed in the nation's coal-fired power units. Transportation restructuring has been facilitated, pollution control of ships and ports has been conducted and the application of new energy vehicles has been promoted. Gasoline and diesel for China VI vehicles have been in full supply.

2.2.4 Constantly Improving the Quality of Water Ecological Environment

Promoting the steady improvement of the quality of water ecological environment. The permanganate index and the annual average concentration of ammonia nitrogen in state-controlled surface water monitoring sections nationwide have decreased from 3.9 mg / l and 0.76 mg / l in 2015 to 3.4 mg / l and 0.49 mg / l respectively.

Conducting comprehensive water basin pollution control. Special comprehensive supervision in key lakes such as Dianchi Lake and Erhai Lake have been conducted. Comprehensive governance and ecological restoration of the Yongding River have been stepped up, and the *General Plan for Comprehensive Management and Ecological*



Restoration of Six Rivers and Five Lakes for Beijing-Tianjin-Hebei Coordinated Development has been released.

Prioritizing the protection of waters with good qualities. By the end of 2018, 6,242 of the 6,251 environmental problems discovered in the special environmental protection action of drinking water sources have been rectified.

Promoting comprehensive prevention and control of groundwater pollution. Efforts have been made to regularly investigate and evaluate the groundwater environment of the centralized groundwater-based drinking water supply areas and the surrounding areas of pollution sources, and dynamically update the database of the list of groundwater-based drinking water sources and pollution sources.

Rectifying urban black and putrid waters. The work targets for 2018 stipulated in the *Executive Plan for the Treatment of Urban Black and Putrid Waters* have been basically achieved. Among the 101 state-controlled sections involved in black and putrid waters in 36 key cities, the proportion of waters with Grade I-III quality has increased by 3% year-on-year while the proportion of waters with quality worse than Grade V decreased by 4.9% year-on-year.

2.2.5 Continuing to Strengthen Marine Ecological Environmental Protection

Strengthening the comprehensive treatment of marine pollution. The *Plan for the Prevention and Control of Offshore Marine Pollution* has been released. Investigation and rectification of the seaward

pollution source have been organized. The *Action Plan for Comprehensive Treatment of the Bohai Sea* has been released.

Strengthening marine ecological protection supervision. The marine ecological protection red lines in 11 coastal provinces have been identified, which has incorporated about 30% of offshore waters and 37% of the mainland coastlines into the ecological protection red lines to strictly control new land reclamation and accelerate the solutions of historical problems left over from reclaimed lands from the sea.

Improve the monitoring capacity of the marine ecological environment. Revisions of laws and regulations such as the *Marine Environmental Protection Law* have been carried out. The pilot of the Bay Chief System has been established. The marine ecological environment monitoring network has been improved and the prevention, control and special monitoring of marine garbage (microplastics) pollution have been advanced. The law enforcement of Blue Sea action has been carried out.

2.2.6 Earnestly Conducting Soil Pollution Prevention

Consolidating the foundation of soil environmental management. Efforts have been made to complete the detailed investigations of soil pollution for 558,000 points and 698,000 agricultural pieces of lands, initially establish a linkage monitoring mechanism for polluted lands in 28 provinces, basically establish the polluted land lists of provincial capital cities, and



formulate and publicize polluted land lists in 212 prefecture-level cities.

Carrying out classified management of agricultural lands. Pilots have been promoted in classifying farmland based on the quality of soil environment at 6 entire counties in provinces including Jiangsu, Henan and Hunan. Identification of prohibited agricultural production areas in Hunan, Henan and Guangdong has been stepped up.

Strengthening the prevention and control of soil pollution in key areas. Provinces (autonomous regions and municipalities directly under the central government) have formulated plans for soil pollution control and remediation. Trials have been conducted in classifying farmlands based on the quality of soil environment at 6 counties in provinces including Jiangsu, Henan and Hunan.

2.2.7 Steadily promoting up-to-standard Discharge from all Industrial Pollution Sources

Improving water pollution treatment infrastructure. By the end of 2018, of the 2,411 industrial clusters such as economic and technological development zones, high-tech industrial development zones and export processing zones that are involved in waste water discharge, 2,357 have built centralized waste water treatment facilities and 2,348 have installed automatic online monitoring devices.

Advancing technological upgrading of enterprises. Papermaking, coking and nitrogen fertilizer enterprises have

basically reached up-to-standard discharge and emissions. Major pollutants discharge units of steel, cement and sheet glass that are under automatic monitoring have remarkably increased the up-to-standard flue gas discharge and emissions rates of main pollutants.

Carrying out self-monitoring of industrial pollution sources. 18 technical guidelines for self-monitoring by pollution units have been issued. The network for nationwide key pollution sources monitoring data management system has been fully established, and about 28,000 enterprises have prepared and completed self-monitoring plans.

2.2.8 Effectively Preventing and Reducing Ecological and Environmental Risks

Improving the risk prevention & control and emergency response system. The enterprise environmental emergency plan management system has been initially set up, with over 70,000 enterprises completing the preparation and filing of environmental emergency plans. The *Methods Proposed for Risk Assessment of Environmental Emergencies in Administrative Regions* has been released and the pilot project for mapping environmental risks in the Yangtze River Economic Belt has been organized.

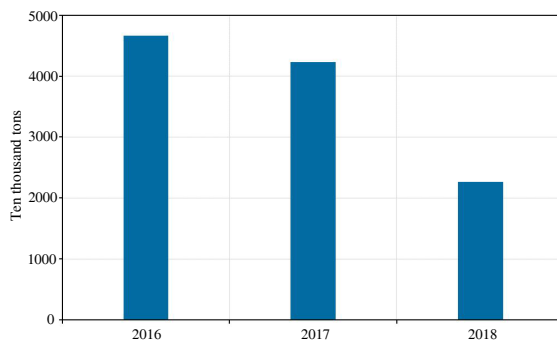
Intensifying prevention and control of heavy metal pollution. The *Opinions on Strengthening Pollution Control in Heavy Metal Industries* has been released. By the end of 2018, a total of 13,897 enterprises in key industries of heavy metals have been



identified nationwide. All provinces have formulated heavy metal pollution prevention and control plans to strengthen the reduction of heavy metal pollutants.

Enhancing supervision on hazardous waste and solid waste. *The Pilot Work Plan for Building zero-waste City* and the *Notice on Resolutely Containing Illegal Transfer and Dumping of Solid Waste and Further Strengthening Overall Supervision and Management of Hazardous Waste* have been released. The *Implementation Plan for Prohibiting the Entry of Foreign Garbage and Promoting Reform of the Import Management System of Solid Waste* has been implemented (Figure 5).

■ **Figure 5. National import volume of solid waste**



Date source: Ministry of Ecology and Environment

Consolidating the foundation of chemical environmental risk prevention and control. Efforts have been made to release the *List of Chemicals Under Priority Control (First Batch)*, *List of Strictly Restricted Toxic Chemicals in China (2018)*, and

Announcement on Prohibition of Production, Distribution, Use and Trade of Permanent Organic Pollutants Including Lindane. A national survey on the production and utilization of environmental hormone chemicals has been completed.

2.2.9 Continuing to Enhance Ecological Restoration

Strengthening biodiversity protection. The implementation of the *Strategy and Action Plan for China Biodiversity Conservation (2011-2030)* has been promoted. The pilot background survey and assessment for prioritized areas of biodiversity conservation has been completed, and the national biodiversity observation network and data platform has been initially established.

Improving ecosystem functions. The *Opinions on the Action of Actively Promoting Large-scale National Land Greening* has been formulated. 39.787 million mu of farm lands have been returned to forests and grasslands and 115 million mu of grazing lands have been returned to grasslands. 6.63 million hectares of lands have completed the tasks of sand prevention and control.

Advancing ecological restoration and governance. Water recovery has been registered in 80% of groundwater monitoring stations in the pilot sections of comprehensive governance of groundwater over-exploitation and river-lake groundwater ecological replenishment in North China. 35 enclosed conservation areas have been added. The urban per capita park green area has reached 14.08 m².



Managing and protecting key ecological regions. The nature conservation system with national parks as the main body has been established. The natural forest resource protection project has completed cultivation of 65.75 million mu of middle and young aged forests. Efforts have also been made to protect the grassland ecosystem, realize banned grazing areas of 80 million hectares and balanced grass-livestock area of 170 million hectares. Two batches of *Lucid waters and lush mountains are invaluable assets* practice and innovation bases have been constructed.

Implementing ecological compensation. *Central Government's Transfer Payment Methods for Local Key Ecological Function Zones* has been formulated. Efforts have also been made to promote the signing of cross-provincial upstream and downstream ecological compensation agreements by relevant provinces in the upstream and downstream of the Xin'an River and other river basins.

2.2.10 Constantly Improving the Management System

Improving the legal system. Amendments have been proposed to the *Water Pollution Prevention Law, Air Pollution Prevention Law, Environmental Noise Pollution Prevention Law, Environmental Impact Assessment Law and Marine Environmental Protection Law*. Efforts have also been made to strictly crack down on various crimes that damage the ecological environment according to law.

Strengthen source prevention. Strategic environmental assessments of the Beijing-Tianjin-Hebei region, Yangtze River Delta and Pearl River Delta have been completed. Efforts have also been made to deepen the reform of streamlining administration, delegating powers and improving regulation and services of environmental impact assessment, and twice amended the *Law on Environmental Impact Assessment of the People's Republic of China* and the *List of Categorized Management of Environmental Impact Assessment of Construction Projects*.

Improving the environmental civil public interest litigation system. By the end of 2018, courts across the country had accepted 178 cases of environmental civil public interest litigation filed by social organizations and concluded 98 cases. The procuratorial public interest litigation system has been improved; courts across the country had accepted 3,113 public interest litigation cases filed by procuratorial organs and concluded 2,247 cases.

Promoting public participation. Efforts have been made to actively carry out ecological and environmental protection publicity and promote the common participation of the entire nation in building a beautiful China, and release the *Eco-environmental Behavior Code for Citizens (Trial)* and the *Guiding Opinions on Promoting Public Access to Environmental Protection Facilities and Urban Sewage and Waste Treatment Facilities*.

Playing the market role. Efforts have



been made to carry out pilot projects on emissions trading as well as paid use and trading of energy use rights, and construct the pilot zones for green finance reform and innovation. By the end of 2018, the national green loan balance had reached RMB8.23 trillion yuan. Environmental pollution liability insurance has been conducted.

Innovating supervision methods. Efforts have been made to facilitate the establishment of a pollutant discharge permit system covering all fixed pollution sources, and release the *Administrative Measures on Pollutant Discharge Permits (Trial)* and *List of Classified Management of Pollutant Discharge Permits for Fixed Pollution Sources (2017 Version)*. A total of almost 40,000 pollutant discharge permits have been issued nationwide.

2.2.11 Intensifying Management System Reform

Forming the Ministry of Ecology and Environment. Efforts have been made to establish the Ministry of Ecology and Environment to uniformly perform the rights and obligations of supervision and administrative law enforcement on various ecological and urban-rural pollution discharge, realize the “five connections” of ground and underground, shore and water, land and marine, city and countryside, as well as carbon monoxide and carbon dioxide, and link pollution prevention and treatment with ecological conservation.

Conducting inspection. Efforts have been made to conduct routine and special

inspections by the central eco-environmental protection inspection team, which has achieved full coverage in the first round of routine inspections, with “look back” to multiple provinces. Key areas of the blue sky campaign have redoubled supervision and designated assistance by following the “five-step method” work model of investigation, assignment, verification, admonition and special inspection.

Enhancing supervision. The Beijing-Tianjin-Hebei and Surrounding Area Atmospheric Environment Management Bureau has been established. The Ecological Environment Supervision Bureau of the Yangtze River, Yellow River, Huaihe River, Haihe River, Pearl River, Songliao, Taihu Basin (Sea Area) & Ecological Environment Monitoring and Scientific Research Center of the Ministry of Ecology and Environment has been established.

Consolidating local responsibilities. Efforts have been made to conduct accountability tracing of leading cadres for ecological and environmental damage, formulate the *Regulations on Auditing Outgoing Official’s Natural Resources Assets (Trial)* to audit the natural resources assets of main outgoing officials at local and related departments, and conduct the trial compilation of natural resource balance sheets.

Promoting the reform of vertical management and comprehensive administrative law enforcement of ecological environment at sub-provincial level. Efforts have been made to release the *Guiding Opinions on*



the Pilot Work of Reforming the Vertical Management System for Monitoring and Supervision of Law Enforcement by Sub-Provincial Environmental Protection Organs and Notice on Coordinating the Reform of Vertical Management System for Monitoring and Supervision of Law Enforcement by

Sub-Provincial Eco-environmental Organs, and coordinate the vertical reform of environmental protection, local institutional reform and comprehensive law enforcement reform in ecological environmental protection.





3. MAIN PRACTICE OF AND EXPERIENCE IN IMPLEMENTATION OF THE PLAN

The fundamental reasons for the prominent achievements already made by implementing the *Plan* lie in the steering and wise decision-making by the CPC Central Committee with Xi Jinping at the core, the scientific guidance and practical power of Xi Jinping's thought of ecological civilization, as well as the exemplary practices of President Xi Jinping. President Xi Jinping has presided over the meeting of the Central Committee on Finance and Economics, attended the National Ecological Environmental Protection Conference and the Central Economic Work Conference with important speeches, and studied on the deployment of the pollution prevention campaigns. Premier Li Keqiang has presided over the executive meeting of the State Council, repeatedly studied on strengthening ecological environment protection and campaigns of pollution prevention and control, and made a series of important instructions. Vice Premier Han Zheng has for many times put forward explicit requirements on the work of ecological protection work. All regions and departments have thoroughly executed the decision-making and deployment of the CPC Central Committee and the State Council, consolidated their responsibilities and made every effort to make breakthroughs.

(1) Adhere to the Guidance of Xi Jinping's thought of ecological civilization. Xi Jinping's thought of ecological civilization is a significant part of Xi Jinping's thought

of socialism with Chinese characteristics in the new era, which provides the direction and fundamental guidance for promoting the modernization of building beautiful China and realizing harmonious coexistence between man and nature. We shall observe "eight adherence", redouble our efforts to promote the construction of ecological civilization, and resolutely fight against pollution.

(2) Adhere to the people-orientated development concept. We have always taken the people's longing for a better life as the goal of our work, continued to improve the quality of ecological environment, prioritized the outstanding ecological environment issues in our work for improving people's livelihood, served the people with full heart, relied closely on the people, promoted mass actions and enabled the masses to enjoy more direct and practical senses of acquisition, happiness and security.

(3) Adhere to ensure leaders of local CPC committee and local government responsible for both economic development and ecological progress, and share the same responsibility in this regard. We have made the bottom line responsibility for local eco-environmental protection that the ecological environment quality shall only become better and shall not be deteriorated. The main targets of the *Plan* have been decomposed layer by layer, and the central ecological



environment protection inspection has been carried out in all aspects.

(4) Adhere to the core of improving the quality of ecological environment. We have concentrated our efforts on the seven iconic battles of pollution prevention and control, implemented a number of major ecological environmental protection projects and advanced the modernization of the national governance system and capability in ecological environment.

(5) Adhere to strive for "six achievements". We have achieved steady progress, unified and overall planning, comprehensive

consideration, linkage of selected points with the entire area, realistic and pragmatic spirit, and endeavored to transform the top-level design confirmed by the CPC Central Committee and the State Council into construction drawings and actual results in a powerful, orderly and effective manner.

(6) Adhere to continuously strengthening basic capacity building. We have established the Ministry of Ecology and Environment, strengthened its institutional arrangement, further enriched the staffing, and achieved positive results in vertical reform of the eco-environmental organs at the sub-provincial level.





4. MAIN CHALLENGES

At present, the construction of China's ecological civilization is in a critical window period for making critical breakthroughs, with the relatively severe overall situation, challenges in the work and unstable basis for continuous improvement of the quality of the ecological environment.

(1)Some places are faced with the double predicament of economic development and eco-environmental protection. Under the ever greater downward pressure of economic development, some places lack a deep understanding of Xi Jinping's thought of ecological civilization and the thought of “*Lucid waters and lush mountains are invaluable assets*”, the urgency of eco-environmental protection has been declined layer by layer in downward transmission and the eco-environmental protection work has been somewhat slackened amid downward economic pressure.

(2)The task of environmental pollution control is arduous. The structural pollution problem is still outstanding, there is a large shortage in national sewage pipe network and there are frequent cases of illegal transfer and dumping of solid waste, especially hazardous waste.

(3)Eco-environmental protection work progresses unevenly. The foundation for ecological environment governance in some places and fields are weak. The urban and rural ecological environment governance is not balanced, and the environmental infrastructure construction in rural areas is seriously lagging .

(4)There are weak points in ecological environment supervision. The eco-environment team needs to be strengthened, the input in eco-environmental governance is insufficient and monotonous, and the market investment and financing mechanism need to be further improved.

(5)There are risks in the successful completion of some obligatory targets. There is still huge pressure for prefecture-level and above cities in the country to complete the target of days with good air quality. A few places have not shown much progress in completing the two targets of reaching the proportion of waters with qualities worse than Grade V, and reaching the proportion of waters with qualities of or better than Grade III. Some places have not met the timing requirements for chemical oxygen demand and the ammonia nitrogen target.



5. CONCLUSION

The *Plan* is a strategic guide for China's ecological and environmental protection during the 13th FYP period, a significant measure for China to implement and promote the overall layout of the "Five-in-One" and to coordinate the layout of the "Four-pronged Comprehensive Strategy", and is an important way for China to achieve ecological civilization reform and make up for the weak points of building the moderately prosperous in all aspects, hence is of great significance for the economic development and environmental protection of China. The *Mid-term Assessment Report of the Plan* released by the Ministry of Ecology and Environment presents from the official perspective the target achievements, progress, main practices and experiences and main issues over the

three years since the implementation of the *Plan*, provides us with a perspective to understand various efforts China has made in ecological environment protection, and to understand, through ecological environmental protection work, the changes in various fields in the process of building a moderately prosperous society in all aspects. At present, as China is at the closing stage of the 13th FYP period and the planning stage of ecological environmental protection for the 14th FYP period, the *Mid-term Assessment Report of the Plan* is conducive for us to summarize the achievements and problems of China in eco-environmental protection during the 13th FYP period, and to peep into China's ideas for eco-environmental protection in the next five years.





ANNEX : LIST OF ACHIEVEMENT OF MAIN TARGETS

System Layer	Index Layer	Target	2015	Progress in 2018	Target for 2020	Progress assessment for 2020
Eco-environmental Quality	1. Air Quality	Percent of days with good air quality in cities at prefecture-level and above (%)	76.7	79.3	>80	Smooth (78.79%)
		Reduction of fine particle (PM _{2.5}) concentration in cities at prefecture-level or above failing to meet the standard (%)	/	{ 23.8 }	{ 18 }	Completed ahead of schedule
		Decline in the percent of days with heavy pollution or even worse in cities at prefecture-level or above (%)	/	{ 24.6 }	{ 25 }	
	2. Water quality	Percent of surface water with quality at or better than Grade III (%)	66	71	>70	Completed
		Percent of surface water with quality worse than Grade V (%)	9.7	6.7	<5	Basically Smooth (63.83%)
		Percent of major rivers and lakes attaining water quality standards (%)	70.8	76.9	>80	



System Layer	Index Layer	Target	2015	Progress in 2018	Target for 2020	Progress assessment for 2020
Eco-environmental Quality	2. Water quality	Percent of undergroundwater with very poor quality (%)	/	/	≈15	
		Percent of coastal waters with excellent and good water quality (I, II) (%)	70.5	74.6	≈70	
	3. Soil quality	The safe utilization rate of contaminated farmland (%)	/	/	≈90	
		Safe utilization rate of contaminated fields (%)	/	/	≈90	
	4. Ecological conditions	Forest coverage (%)	21.66	22.96	23.04	
		Forest stock volume (100 million m ³)	151	175.6	165	
		Stock wetland (667 km ²)	/	/	≥8	
		Vegetation coverage of grassland (%)	54	55.7	56	Smooth (85%)
		Environmental condition index of counties in areas with key ecological functions	60.4	/	≥60.4	
	Pollutant Discharge Amount	5. Reduction of major pollutants discharge (%)	Chemical oxygen demand (COD)	/	{ 8.5 }	{ 10 }
Ammonia nitrogen (NH ₃ -N)			/	{ 8.9 }	{ 10 }	Smooth
Sulfur dioxide (SO ₂)			/	{ 18.9 }	{ 15 }	Completed
Nitrogen oxides (NO _x)			/	{ 13.1 }	{ 15 }	Smooth



System Layer	Index Layer	Target	2015	Progress in 2018	Target for 2020	Progress assessment for 2020
Pollutant Discharge Amount	6. Reduction of regional pollutants discharge (%)	Volatile organic compounds (VOC _s) of key industries in key regions	/	/	{ 10 }	
		Total nitrogen (TN) in key regions	/	/	{ 10 }	
		Total phosphorous (TP) in key regions	/	/	{ 10 }	
Ecological Conservation and Restoration	7. Protection rate of wildlife under national priority protection (%)		/	/	≥95	
	8. Natural shoreline retention rate (%)		/	/	≥35	
	9. Newly protected land under desertification control (10,000 km ²)		/	{ 6.63 }	{ 10 }	
	10. Newly protected land under water and soil erosion control (10,000 km ²)		/	{ 17.92 }	{ 27 }	Basically Smooth (62.67%)

Note: 1.Progress cumulative number in brackets { } ; 2. “/” means the data is not available.

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