

Retrospect and Prospect of Ecological Civilization Construction in China

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Abstract. Since the party's 18th National Congress, ecological civilization construction has become a governing idea, it has risen to the national strategic level. The system framework of ecological civilization has been basically established, and the environmental protection system is being continuously improved. Environmental pollution control is fully promoted, and pollution control has achieved remarkable results. The party's 19th National Congress has proposed new requirements for the construction of ecological civilization, and has clarified the timetable and road map for construction of beautiful China in the new era. To promote ecological civilization construction and build a beautiful China, we must establish the basic concept of the harmonious coexistence of human and nature, achieve the strictest environmental protection policy, adhere to green development, and speed up the reform of the ecological civilization system.

Introduction

Since the party's 18th National Congress, the CPC Central Committee has made top-level design and overall deployment for the construction of ecological civilization. Green development is the basic concept of China's economic and social development in the 13th Five-Year or even longer period. The status and role of ecological civilization construction has become even more prominent. Ecological civilization construction has been advanced in an all-round way. The process of green development has accelerated significantly. Great achievements have been made in ecological environment protection. Beautiful China's construction has taken important steps. The party's 19th National Congress has launched a new journey for the building of a modern socialist country. New requirements for construction of ecological civilization have been put forward. The timetable and roadmap for the construction of a beautiful China in the new era have been clearly defined.

Profoundly Understanding the Achievements of Ecological Civilization Construction Since the Eighteenth National Congress of the Party

The top-level design and overall deployment for the construction of ecological civilization have been made. To protect the ecological environment has become a global consensus. However, the Communist Party of China is the first party who take it as a program of action for their governance. The party's 18th National Congress has brought ecological civilization construction into the "Five in One" overall layout of the socialism with Chinese characteristics. The construction of ecological civilization has been deeply discussed for the first time. "Promoting green development, circular development and low carbon development" and "Building a beautiful China" were raised for the first time, too. Since then ecological civilization construction has become a governing idea, and has raised to the national strategic level. The third plenary session of the 18th CPC central committee has systematically deployed ecological civilization construction from systems, mechanisms and institutional systems. We should focus on building a beautiful China and deepening the structural reform of ecological civilization and speed up the construction of the system of ecological civilization. The fourth plenary session of the 18th CPC central committee has required a strict legal system to protect the ecological environment, and promoting the construction of ecological civilization from the perspective of ruling the country according to laws. The fifth plenary session of the 18th CPC central

committee has taken "green development" as one of the five major development concepts to lead China's overall development. They also required that civilization development should include production development, living well-off and good ecology. We should also accelerate the construction of a resource-saving and environment-friendly society.

China's rapid development has encountered tremendous pressure and challenges from resources and the environment. Since the party's 18th National Congress, the CPC Central Committee and the State Council have issued "the Opinions on Accelerating the Construction of Ecological Civilization" and "the General Plan for the Reform of Ecological Civilization System". The overall goal of China's ecological civilization construction and the general implementation plan of ecological civilization system reform have been established. By perfecting laws and regulations, improving the standard system, perfecting the property right system of natural resources and the system of use control, perfecting the supervision system of the ecological environment, and strictly keeping the ecological red line of the resources and environment, the strategic arrangements and institutional framework for deepening the structural reform of ecological civilization have been formed, and the basic guidance for comprehensively promoting the ecological civilization construction has been provided. A development path of ecological civilization that suits China's national conditions has been explored. In April, 2015, the CPC Central Committee and the State Council have issued the "Opinions on Accelerating the Construction of Ecological Civilization", which is the first document issued by the Central Committee for thematic deployment of ecological civilization. "The Opinions" has defined the overall requirements, goals, missions, and system of ecological civilization construction. In September, 2015, "the General Plan for the Reform of Ecological Civilization System" was issued. It proposed the evaluation and accountability system to improve ecological civilization, and had effectively curbed the deterioration of the ecological environment.

Since 2012, China's ecological environment protection laws and regulations have been continuously improved, and the construction of environmental protection system has been continuously strengthened. The "Environmental Protection Law of the People's Republic of China", which was nationally revised in 2014 and implemented on January 1, 2015, is called "the most stringent new environmental protection law" in history. It provides a legal guarantee to protect the ecological environment, prevent and control environmental pollution, safeguard public health, promote the construction of ecological civilization, and promote sustainable development for economy and the society. The "Public Interest Litigation", "Daily Penalty" and "Seizure and Forfeiture" in the new environmental protection law have become a powerful weapon to crack down on environmental violators. The situation of "too loose and too soft" on environmental law enforcement has been completely changed.

From 2013 to 2016, the "Air Pollution Prevention Action Plan", "Water Pollution Prevention Action Plan" and "Soil Pollution Prevention Action Plan" were issued successively. They further clarified the objectives of prevention and control of air, water and soil pollution. It is emphasized that we must earnestly strengthen the assessment of targets, and strictly enforce environmental supervision and accountability.

In November, 2016, the State Council issued "the Ecological Environment Protection Plan for the 13th Five-Year". "The Plan" is the programmatic document for China's ecological environment protection during the "13th Five-Year" period. It pointed out 7 main missions on air, water and soil pollution prevention. Taking the improvement of environmental quality as the core, the overall work of the "13th Five-Year Plan" for eco-environmental protection was planned.

Environmental pollution control is fully promoted, and pollution control has achieved remarkable results. The air quality is better. Until November, 2016, the coal-fired generating units in China have completed ultra-low-emission reforms of 425 million kilowatts, accounting for 47% of the total coal-fired power capacity. In 2016, the proportion of average good days in the 74 cities monitored during the first phase of the new air quality standard was close to 75%, which is higher than that in 2015. The average concentration of PM_{2.5} was 9.1% lower than that in 2015. The average

number of good days in 338 cities was close to 80%. The concentration of fine particles in key areas was reduced. Comparing to that of 2013, the concentration of PM 2.5 in the Beijing Tianjin Hebei region decreased by 33%, that in the Yangtze River Delta region decreased by 31.3%, that in the Pearl River Delta region decreased by 31.9%. The number of cities that meet the air quality standard and that of good days had increased. In 2016, during the 338 cities, there were 84 of them meet the air quality standard, which was 11 more than that of the last year. The good day ratio was 78.8%, 2.1 percent more than that of the last year.

The prevention and control of water pollution has been strengthened. In order to make clean drinking water available for more people, the Yangtze River Economic Area carries out special environmental protection law enforcement measures for drinking water sources. All 319 centralized drinking water source protection areas in 126 cities of 11 provinces were delimited. More than half of the 399 problems found in the investigation have been cleared and rectified. Urban black and odorous water bodies were inspected and a regulatory platform was established. Until November 2016, 13.3% of the 2014 black and odorous water bodies had been renovated, 32.5% of them were being renovated. In 2016, the daily treatment capacity of urban sewage treatment plants increased by 26.3% than that of 2012, the urban sewage treatment rate was 92.4%. 5.1 percent more than that of 2012. In 2015, the sewage treatment rate of the counties established in China was 51.0%, that of the towns was 11.5%.

The repairing ability of the ecosystem has gradually increased. From 2009 to 2013, the forest area in China was 207.69 million hectares, which was 1.223 million hectares more than that in 2004-2008. The forest cover rate had grown by 1.27 percentage. In 2016, China afforested by 7.2 million hectares, which was 28.7% more than that of 2012. In 2015, China stopped soil erosion for 115.58 million hectares of land, an increase of 12.63 million hectares compared to 2012. In 2016, soil erosion was stopped on 5.62 million more hectares of land, which was 28.6% more than that of 2012. The average annual effective sand control area in China is equivalent to a medium-sized county. One fifth of the country's desertified land has been treated to varying degrees. The situation of desertification is being overall contained, continuously reduced, and functionally enhancing.

In-depth exploration of the major problems in China's ecological environment

Shortage of water resources and serious water pollution. The total amount of freshwater in China ranks the second in the world, but the per capita amount is less than a quarter of the world average level, ranking 110th in the world. It is one of the 13 water-scarce countries identified by the United Nations. Among the more than 660 cities in the country, more than 400 cities lack water, of which more than 100 cities are seriously short of water.

In 2015, the water quality of the 116 main lakes in China shows that, the lakes with overall water quality with class I~III, class IV~V and worse than class V were 25.0%, 51.7% and 23.3%, respectively. In recent years, China's total discharge of sewage is about 66 billion tons, which can fill 1.7 Three Gorges Reservoir. If 1 liter of contaminated water needs 8 liters of purified water to dilute, the sewage had polluted about 40% of China's freshwater resources, and nearly 60% of the lake water could no longer be used as domestic water. Although the water quality of coastal waters in China is generally good in recent years, the seawater pollution in the offshore areas is still not optimistic. In 2016, during the 417 seawater quality monitoring sites in coastal waters, the seawater quality with class 1~2, class 3, class 4 and worse were 73.4%, 10.3% and 16.3%, respectively.

Bad air quality. According to WHO's standard, when the weight of suspended fine particles contained in each cubic meter of air is less than or equal to 20 micrograms, the air is clear. However, the annual average air qualities in most areas in China are far more than that standard. Air pollution is a serious threat to human health and is also the cause of acid rain. When the acid rain is falling to the ground, it can corrode plants, soil and buildings. Air pollution has always been an annoyance in China's economic development.

Serious soil pollution. China's arable land is approaching the limit of 1.8 billion of Chinese acres. It's about 1.3 Chinese acres per capita, which is less than 40% of the average amount in the world.

0.15 billions of Chinese acres of them are polluted by organics and heavy metals, which results in deterioration of physical and chemical properties of soil and affect the quality and safety of agricultural products.

China is still in the primary stage of socialism, and is still the largest developing country in the world. Development is still the primary task of China. At the same time, the contradiction between development and resource protection is becoming more and more significant. China is still facing severe challenges such as tight resource constraints, serious environmental pollution and degradation of ecosystem. The existing problems of the ecological environment in China have historical and natural causes, and are closely related to China's conditions and development stages. They are the contradictions and problems encountered in the development process. We must strengthen our confidence and unswervingly promote it steadily in environmental pollution control and ecological civilization construction.

Strategic plan to promote the construction of ecological civilization

The timetable and road map for construction of beautiful China in the new era. The party's 19th National Congress has opened a new journey to build a modern socialist country, has put forward new requirements for the construction of ecological civilization, and has made a clear timetable and roadmap for the construction of beautiful China: until 2050, on the basis of building a moderately prosperous society, we will build China into a strong, prosperous, democratic, civilized, harmonious and beautiful socialist modernized country in two phases. During the first phase (2020~2035), the goal of ecological civilization construction is "The ecological environment is fundamentally improved and the goal of building a beautiful China has been achieved. A clean, low-carbon, safe, and effective energy system has been established, and the ecological civilization system is more sound". During the second phase (2036~2050), the goal of ecological civilization construction is "China will have a high degree of ecological civilization. The beautiful eco-environment of blue sky, green land and clean water is normal. There are harmonious development between man and nature, and China will be a beautiful socialist modernized country".

Steady progress toward the goal of building a beautiful China. Adhere to the basic national policy of saving resources and protecting the environment. The report of party's 19th National Congress shows that we should adhere to the basic national policy of saving resources and protecting the environment, treat the ecological environment like treating our lives, coordinate the management of the ecosystem, carry out the strictest ecological environment protection system, and form a green development approach and lifestyle. Firstly, we should put saving resources in the first place. We should save resources in the whole society, whole fields and whole process, and pay close attention to energy conservation, emission reduction and consumption reduction. Secondly, we should insist on protection priority and natural recovery. In environmental protection, we must insist on prevention and put the resource governance in the first place. In ecological restoration, the natural restoration is the most important. Thirdly, we should promote green development, recycling development and low carbon development. Combining development and prevention together. Developing energy saving industry, strengthening resource recycling and expanding renewable energy scale. Taking the road of civilized development with production development, well-off life and good ecology. Fourthly, we should provide space for saving resources and protecting environment. To optimize the land space, promote production space intensive and efficient, living space livable, ecological space clean and beautiful.

Speed up the reform of the ecological civilization system. To reform the ecological civilization system in the new era, we should do it from the direction of the reform of the system, the focus, key and guarantee of it. Firstly, we should promote green development. The problem of harmonious symbiosis between human and nature should be solved. We must resolutely take the road of civilized development with productive development, affluent life, and good ecology, and build a resource-saving and environment-friendly society. Secondly, significant environmental problems

should be solved. We must build an environment governance system that is led by government, based on enterprise and joined by social organizations and the public. We should also actively participate in global environmental governance and implement emission reduction commitments. Thirdly, we should strengthen ecosystem protection. We must implement ecosystem protection and restoration projects, optimize ecological safety barrier system, construct ecological corridors and biodiversity conservation networks, and improve ecosystem quality and stability. Fourthly, we should reform the environmental regulatory system. We must establish a national space development protection system, improve supporting policies for the main functional areas, and establish a nature protection system centered on national parks. Destruction of the ecological environment should be stopped and punished.

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References

- [1] S.S. Qin. Journal of the Party School of the Central Committee of the Communist Party of China, (2018) No. 4. (In Chinese)
- [2] J.H. P. Journal of Dongyue Forum, (2018) No. 3. (In Chinese)
- [3] J.H. Cheng, X.J. Peng, Y. Feng. Journal of China University of Geosciences (Social Science), (2018) No. 3. (In Chinese)
- [4] X.X. Zhang. X. Chen. Z. Yao. Journal of changchun university of science and technology (Social Science), (2018) No. 1. (In Chinese)
- [5] Information on <http://www.stats.gov.cn>
- [6] H.C. Xhou. Journal of Environmental protection, (2017) No. 12. (In Chinese)
- [7] H.Y. Zhang, Q. Zhang, S.F. Liu. Journal of Environmental protection, (2017) No. 12. (In Chinese)
- [8] F. Lu. Journal of China University of Geosciences (Social Science), (2017) No. 1. (In Chinese)
- [9] J. Cheng. Journal of Tianjin Administration Institute, (2017) No. 1. (In Chinese)
- [10] J. Lu, C.B. Qin, J. Wan. Journal of Environmental protection, (2017) No. 12. (In Chinese)