

The Golden Age of Promoting Ecological Civilization in China

Junlin Shao

School of Government, Beijing Normal University; Beijing, 100875, China.

**Corresponding author's email: shaojunlin2009@qq.com*

ABSTRACT

China has been devoted to constructing ecological civilization since 2012. By establishing a legal framework, carrying out administrative reforms and advancing relevant S&T, China has entered a golden age of promoting ecological civilization. But there still exists many challenges in human-nature balance, central-local government relationships and policy implementation. Because China's actions have a significant impact on ecological and environmental situations, stakeholders should seize the opportunity to solve more difficult problems in sustainable development.

Keywords: *Ecological Civilization, Golden Age, Biodiversity*

1. INTRODUCTION

On 1st February, China published a revised edition of *List of State Protected Wild Animals* [1]. This is the first systematic revision of the list since its promulgation in 1989, adding up to more than twice as many as the original species, and upgrading 65 species from the second level to the first level of national protection. This revised list is the result of 32 years of numerous expert seminar discussions held by the administrative department.

This revision, together with many other activities, such as the construction of national parks [2], the ban on terrestrial wildlife [3], the commitment on carbon neutrality [4], marks the coming of the golden age of building ecological civilization (Ecological Civilization) in China. It would be a good opportunity for addressing long-term thorny ecological and environmental problems.

This paper is organized as follows. In section 2, we briefly introduce China's actions and efforts on the construction of Ecological Civilization. In section 3, we discuss the challenges ahead. And next, we look forward to how China's experience of constructing Ecological Civilization can benefit the world. Finally, the last section summarizes the paper and calls the scientific community to seize the opportunity.

2. CHINA'S ACTIONS AND EFFORTS

The academic discussion of Ecological Civilization dates back to the 1980s [5]. In the report of the 17th National Congress of the CPC in 2007, then-President Hu Jintao put forward the concept of Ecological Civilization for the first time in the political domain. However, it was not widely accepted until the 18th National Congress of the CPC when Ecological Civilization was adopted in the Party Constitution and incorporated into the overall "five-in-one" plan. It was at that time easily to be regarded as a slogan, a kind of political rhetoric, an imaginary of a utopian harmonious world [6] and caused lots of doubts about its credibility at first. Nevertheless, the efforts of the Chinese government over the past eight years tells a different story.

2.1 Laws and Regulations

As one of the priorities of the President Xi Jinping, the basic legal framework of Ecological Civilization has been established. In 2015, the Central Committee of CPC and the State Council released *Opinions on Accelerating the Construction of Ecological Civilization*, a programmatic document which clarifies the main purposes and mechanisms of Ecological Civilization construction. Soon after that, the *Overall Plan of Ecological Civilization System Reform* was issued. China determined to build up a comprehensive Ecological Civilization system composed of eight main components by 2020, such as property right system of natural

resources assets, ecological compensation system, market system of environmental governance and ecological protection, and Ecological Civilization performance evaluation and accountability system.

Many long-standing regulatory issues have been solved. For example, China's first special law on river basin protection - *The Yangtze River Protection Law* – has been approved, which took almost 30 years since it was first proposed by the Ministry of Water Resources. In addition to the central government, local governments have also promulgated many local regulations and documents. For example, From January 1, 2019, *The Regulations of Yunnan Province on Biodiversity Conservation* is officially implemented. This is the first local regulation on biodiversity conservation in China. On May 22, 2020, Yunnan Province released China's first white paper on biodiversity "*Biodiversity in Yunnan*". At the same time, it also issued the proposal for biodiversity conservation, indicating that protecting biodiversity was the common responsibility of the whole society and calling each of us to take action.

2.2 Administrative Reform

Fragmented management was a huge obstacle in Ecological Civilization construction. In 2018, the State Council established the Ministry of Natural Resources (MNR), Ministry of Ecology and Environment (MEE), Ministry of Agriculture and Rural Affairs (MARA), and adjusted the responsibilities of relevant ministries. For example, the responsibilities of dealing with climate change and emission reduction, supervising and preventing groundwater pollution, have been assigned to MEE from National Development and Reform Commission (NDRC) and former Ministry of Land and Resources. Integration of responsibilities could avoid buck-passing and makes it possible for efficient natural resources management and ecological conservation.

2.3 Application of Science and Technologies

S&T is one of the core elements to solve ecological and environmental problems faced by human beings. Although there exists capacity deficits [7] in some research fields, the Chinese government has spared no effort in supporting scientific research and promoting green technology innovation to meet various ecological challenges. For example, in the field of biodiversity conservation, with the advancement of emerging technologies such as remote sensing, camera-trapping and unmanned aerial vehicle (UAV), we can gather huge amount of information on wildlife population and distribution, which can be used to design better policies for wildlife conservation. At the same time, China has also built many platforms to strengthen data sharing and break the data island. The Qilian Mountain area, has established an omni-directional ecological observation

network system by combing sorts of emerging technologies and become a model of ecological protection [8].

3. CHALLENGES AHEAD

The construction of Ecological Civilization is a complex problems involving many shareholders and different policy subsystems. Although China has made great progress on the construction of Ecological Civilization, there still exists some obstacles and challenges ahead, including how to balance local peoples' interests and ecological conservation, how to coordinate the relationship between the central government and local governments, and how to implement those well-designed policies properly to avoid policies failure. A comprehensive understanding of these challenges is the key to promoting a better construction of Ecological Civilization.

3.1 Balance between People and Nature

The first challenge relates to the balance between people and nature. Ecological Civilization is a developing concept with the core of dealing with the relationships between humanity and nature [9]. However, it is difficult to handle the tension between human and nature sometimes.

In the past, economic growth overwhelmed nature conservation and caused serious environmental degradation. Nowadays, the situation reverses in some places. For example, with strict protection, the number of Asian elephants gradually increased by 52% of its number in the early 1980s [10], all of which located in Yunnan Province. Due to elephant's huge appetite and wide range of activities, the areas with the rising number of Asian elephants will face greater resource pressure, and the probability of human-elephant conflicts will increase accordingly. In China, there were more than 16,000 human-elephant conflicts during 2013-2019, causing 73 casualties and direct property losses of \$ 30 million, with the indirect losses incalculable [11]. Biodiversity conservation at the cost of hampering local residents' interest is definitely not Ecological Civilization. Balancing the need of local people and ecological protection is thus one of the core problems of constructing Ecological Civilization.

3.2 Central-Local Government Relationship

The second main challenges has to do with the central-local government relationship which covers all aspects of the construction of Ecological Civilization. Local governments' financial capacities do not match their responsibilities in Ecological Civilization construction.

For example, China's law clearly stipulates that wildlife resources belong to the state and are the common wealth enjoyed by all the people; the purpose of protecting wildlife is to safeguard the national interests and the common interests of mankind. Thus, the main responsibility of Asian elephant protection should mainly attribute to the central government. In June 2020, The Reform Plan for the Division of Financial and Expenditure Responsibilities between the Central and Local Government in Terms of Natural Resources confirmed the protection of national key terrestrial wildlife as the joint financial responsibilities of the central and local governments.

However, five of the nine counties (cities and districts) where Asian elephants are distributed in China have long been the national key counties of poverty alleviation, and their development is limited due to the protection of Asian elephants. Since 2006, the central government has subsidized Xishuangbanna with compensation annually through general transfer payment arrangements, but the amount is far less than needed. Lack of funds makes the proper implementation of many policies difficult.

3.3 Radical Policy Implementation

The third main challenges relates to the implementation of policies and this indeed reflects the time dimension of the construction of Ecological Civilization. In other words, the effect of Ecological Civilization construction may take a long time to show, but officers could not wait that long and has to implement policies even if the conditions are not sufficient. The government tends to make achievements in the short term and hence takes radical measures, which could not only waste resources, but cause new problems.

For example, to win the “Battle of Blue Sky”, Beijing, Tianjin, Hebei and surrounding areas carried out the project of “Coal to Gas” and removed a large number of coal-fired boilers in 2017, but gas supply could not meet the surging demand, leaving many households in cold and leading to deterioration of air quality for large areas [12].

Another campaign - Toilet Revolution – had the same trouble. To improve the living environment and dispose toilet feces in rural areas effectively, China renovated rural toilets to sanitary ones. However, new toilets faced low acceptance [13] in many places. Even worse, in some villages, old toilets were dismantled long before new ones were built, making toilets unavailable to people.

In spite of the good starting point, radical implementation ignored policies’ feasibility in different regions and resulted in discontent. Improper implementation can not only achieve the policy objectives, but also bring all kinds of side effects and hinder the construction of ecological civilization finally.

4. CONTRIBUTES TO THE WORLD

China is the largest carbon emitter in the world [14] and owns exceptional biodiversity [2], whose actions in ecological and environmental issues would have a significant impact on the world. Through Ecological Civilization construction, China is making its contribution to the SDGs 2030, to the Paris Agreement, to the Convention on Biological Diversity, as well as addressing its own challenges in development.

President Xi describes Ecological Civilization vividly as “lucid waters and lush mountains are gold mountains and silver mountains”, revealing the determination of developing economy and protecting ecology at the same time.

The concept of Ecological Civilization has gradually gone beyond China and attracted more and more attention [9, 15]. Many believe Ecological Civilization is similar to “sustainable development” and they do share many in common. UN points out successful transformation for sustainable development needs for levers: governance, economy and finance, individual and collective action, science and technology [16].

The experience of Ecological Civilization construction in China shows the same lesson. It must be supported by strong governance system and capacity, enough financial funds and various stakeholders; it must be grounded in science and could be adapted according specific contexts. Environmental protection, climate change, biodiversity conservation, all these challenges are common to all mankind, all countries around the world. In the 20th National Congress of the CPC, the achievements of Ecological Civilization construction would be systematically summarized and this would offer more insights to world.

5. CONCLUSION

China has been devoted to constructing ecological civilization since 2012. President Xi Jinping has pointed out that the construction of Ecological Civilization is a great plan for the sustainable development of China and the party’s long-term approach to domestic development.

In this paper, we first points out that by establishing a legal framework, carrying out administrative reforms and advancing relevant S&T, China has entered a golden age of promoting ecological civilization. And this provides valuable opportunities for policy makers and scientists

Then, we finds that, although making great progress, there still exists many problems, among which are the balance between people and nature, central-local governmental relationship and radical policy implementation. The imbalance between people and nature, such as ignorance of people’s living, may cause unexpected consequences in the process of protecting

ecosystem. The mismatch of power and responsibility between the central and local governments has also caused many problems. For example, local governments do not have sufficient financial resources to deploy emerging technologies. Radical policy implementation, which ignores regional difference and tries to achieve policy effects in a short time, would produce many new problems and negative effects on the contrary. All these challenges, must be taken seriously in order to advance ecological civilization in the future.

However, we believe this still is a good opportunity for stakeholders worldwide to get involved and address more difficult ecological and environmental challenges. The 15th Conference of Parties (COP 15) to the Convention on Biological Diversity in Yunnan in May 2021 defines its theme as “Ecological Civilization: Building a Shared Future for All Life on Earth”. This would further promote the reflection of Ecological Civilization worldwide and probably more and more countries and regions would accept this concept and learn from China. Ecological Civilization would surely attract more and more attention around the world, and help to the realization of SDGs. As China has entered a golden age of ecological civilization issues, the scientific community should seize the opportunity.

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