

Strategic Comments and Suggestions on the Red-line State Policy of Ecological Protection in China under the New Normal

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Since the reform and opening up, with the rapid development of urbanization and industrialization, China has entered the economic transformation period with 6000-8000 dollars per capita GDP with total economic output almost ranking the second in the world. However, it faces the plight of resource constraint, serious environmental pollution and ecosystem degradation, bringing great challenge to the sustainable development. With the increasing intensity in the use of the nature, occupation and destruction of China's ecosystem has become severer, marking the change from structural damage to functional disorder.

In particular, the trend of grassland ecosystem degradation is quite obvious, while wetlands keep shrinking and ecosystem services declining. China's per capita arable land resources, forest resources, and grassland resources are about 39%, 23% and 46% respectively of the world average. Yet the new urbanization is the inevitable trend of China's future economic and social development and with the improvement of the urbanization rate, its resource environment pressure will further increase. Studies show that the reasonable carrying capacity of land resources in China is only about 1 billion and 150 million, which is now overloaded about 200 million. The red line of ecological protection is important to the construction of regional ecological security pattern, the protection of ecological system functions, the maintenance of biodiversity and sustainable economic and social development. Adapting the population distribution and economic layout to the carrying capacity of resource environment, and promoting the economical and intensive use of all kinds of resources are of great practical significance and far-reaching historical influence to maintain national ecological security and protect people's working and living conditions.

The basic connotation and historical evolution of the "ecological protection red line"

The "red line" generally refers to the boundary line of land, also likened the impassable boundary, which was first seen in urban planning. With the deepening of the concept, the connotation of the "red line" also extends from the space constraint to the quantity and quality constraint, from the spatial planning to the elemental planning and management system. At present, the "red line" is usually a binding number of space

The ecological protection red line refers to the strict control boundary legally delineated in the key ecological function areas, ecological and environmental sensitive areas and fragile areas, which is also the bottom line of national and regional ecological security. It is important to the construction of regional ecological security pattern, the protection of ecological system functions, the maintenance of biodiversity and sustainable economic and social development. However, there are many problems in its implementation. This report is going to talk about it and provide some solutions.

and quantity, to indicate the boundary line, the control line or the bottom line of land. In the top-level design of ecological civilization, the Party Central Committee borrows the word "red line" to show the indestructible seriousness of the ecological environment protection. According to the *Technical Guidelines for the Delineation of Ecological Protection Red Line* by the Ministry of Environmental Protection, the red line refers to the strict control boundary legally delineated in the key ecological function areas, ecological and environmental sensitive areas and fragile areas, which is also the bottom line of national and regional ecological security. Areas surrounded by the red lines are ecological protection red-line zones, which plays an important role in the construction of regional ecological security pattern, the protection of ecological system functions, the maintenance of biodiversity and sustainable economic and social development.

From the establishment of China's first natural reserve in 1956, and the identification of 50 important functional areas of ecological service in 2008, to the stipulation of national restricted and prohibited development zones in 2010, and the clear propose of drawing the red line in the *Opinions of the State Council on Strengthening the Key Environmental Protection Work* in 2011, we do see a widening range and a clearer target of China's ecological protection.

And the above-mentioned opinions also put forward clearly to draw red lines in the important ecological functional areas, land and marine ecological sensitive and fragile areas. It was the first time for China to raise the concept of "ecological protection red line" as well as the delineation task in the document of the State Council.

In 2015, the *Technical Guidelines for the Delineation of Ecological Protection Red Line* was issued after three years of theoretical and practical research. At present, in additional to the red line of cultivated land (1.8 billion mu), there are red lines of total water consumption, total energy consumption, total pollutants into the sea and so on, which indicate that China's economic and social development in many ways has been close to the limit of resource and environment, and the economic development has entered the new normal. The most direct test China now faces is whether or not it can hold the ecological protection red line.

Problems

First, the concept and connotation is not clear enough and the understanding is not unified. As the most important mechanism in the field of ecological protection and the focus of relevant research in China, the concept and connotation of ecological protection red line has not yet reached agreement. Though the views of domestic experts differ from

Table 1 the resource and environment red lines designated by the state

Name	Main content
Red line of total water consumption	By 2030, the total national water consumption will be controlled within 700 billion m3.
Red line of pollutant receiving in water functional areas	By 2030, the standard-reaching rate of the national water functional areas will be increased to over 95%.
Red line of air pollution	By 2017, the inhalatable particle concentration of the country's prefecture-level and above-level cities will be decreased by 10% that of 2012.
Red line of carbon emission	By 2020, carbon dioxide emissions per unit of GDP will be decreased by 40% to 45% that of 2005.
Red line of cultivated land	By 2020, the red line China must hold will be 1 billion and 805 million, with the guarantee of both quantity and quality.
Red line of wetland protection	By 2020, there are no less than 800 million mu of wetland.
Red line of forest protection	Forest coverage rate reached 26%, while forest areas of no less than 3 billion and 733 million mu.
Red line of total energy consumption	By 2015, the total national energy consumption will be about 4 billion tons of standard coal.
Red line of total pollutants into the sea	By 2020, the standard rate of pollutant discharge into the marine ecological protection red-line area will reach 100%, while the total amount decreases by 10% to 15%.

each other, Forestry Bureau, Ministry of Water Resources, Marine Bureau, Ministry of Environmental Protection and other different administrative government departments have designated their own red lines. Despite the official release of the Technical Guidelines for the Delineation of Ecological Protection Red Line, the red line drawn by China's Ministry of Environmental Protection is not the same with that of the Central Committee. Currently, there are many different versions of the red line in environmental protection, like ecological protection red line, environment red line, ecological environment red line, ecological environmental protection red line, ecological function baseline, the bottom line of environmental quality safety and so on. Which one is closer and more practical, still no answer.

Second, it lacks of coordination mechanism. On the state level, it lacks of unified decision-making as well as supervision and management system and mechanism, with institutional obstacles like functional mismatches, conflicts and overlapping of government departments, causing conflicts between national public interests and sector industry interests. The provisions of the state need the recognition of the local governments, yet the related interests of each local government sector bring challenges to the delineation of the red line. The current management system of the ecological environment is complex, with a great number of departments and levels and a decentralized management. Without systematical arrangement and overall planning of management strategies and policies, it is impossible to realize the coordination of the basic and technical standards. In addition, the lack of effective ecological compensation mechanism between ecological protection areas will bring troubles to the implementation and coordinated development. And there are contradictions between local economy and ecological protection, between the short-term development and the long-term interests.

Third, it lacks of certain standards. Thus it hinders practical application. The standard is hard to set because of various economic development, environment vulnerability, climate and geology of different regions, as well the dynamic environmental changes. What's more, the supporting role of environmental protection standards should be played in the delineation of the red line. Although China's current environmental protection standards has formed with the environmental quality standards and pollutant discharge standards as the core, and environmental monitoring standards, environmental basis standards and environmental management technology specification as the important components, with an environmental protection standard system composed both by the state and the local, there are still some problems, which mainly are the unbalanced support for different elements(such as soil, ecology, and other complex factors), and the incomprehensive support for the integrated ecosystem management; regional pertinence is not strong enough to support the classification management; and the system and coordination of the resource management standards need to be strengthened.

Forth, the legal system is imperfect. Reasonable and explicit legal system is the basis of ensuring the implementation of space control measures. As the institutional innovation of China's environmental protection ecological protection red line has become a major national policy, but the key of implementation is a perfect legal system. It involves many aspects of legislation, including land use planning, ecological protection, natural resources, pollution control, bio safety and so on, yet no current

legislation in China has been clearly related to it, which can only enhance the importance of ecological space from a macro level. In addition, because of China's vast territory, and complex local situations, to make general laws and regulations is quite difficult. Therefore, only the local government promulgates local regulations according to its own situation, in order to strengthen the protection and implementation of the ecological space.

Fifth, it's hard to put into practice. All the above-mentioned problems result in the difficult implementation. From the Third Plenary Session of the 18th Central Committee of the Party, we do see many institutional innovations of ecological civilization, like the ecological protection red line, natural resource assets and liabilities, off-office auditing of natural resource assets, and lifelong accountability system for environmental damage, which reflect the country's deep concern on environmental protection. But how to avoid the red line becoming a "hanging line", and how to make the environmental evaluation of leading cadres work, such implementation after top-level design still need more innovation and bravery.

Suggestions

This report believes that to promote the ecological protection red line, following aspects should be focused:

First, strengthen the basic research, clarify the concept, improve relevant technology, and carry out further eco-environmental baseline survey to grasp the ecological matrix and thus make it real.

To find out the ecological matrix is not only the important basis for the delineation, but also the premise of the implementation. Current economic development may be affected, because of the most stringent protection after the set of the red line which, to a certain extent, may influence the local industrial structure and layout. Hence, relevant basic investigation should be conducted before the delineation, in order to make it more practical and reasonable, and to refine the boundary and the management afterwards. A clear definition, an unified understanding, an improved delineation technology, and a perfect related standard system are the key to make the research more pertinent, the departments more coordinated, the delineation more operational, and the protection more focused. Therefore, local eco-environmental baseline survey should be supported and promoted, while other relevant basic research deepened, to make clear what to do, and to determine how to do.

Second, strengthen management while establish a hierarchical management and monitoring system, an assessment system, and an

ecological view of political achievements, as well as an accountability system. Clarify the scope of the first-level and the second-level protection areas, as well as the management and reward system; implement the most stringent systems and regulations; establish a set of withdrawal compensation mechanism for the established enterprises in red-line areas to promote ecological protection through the interest leverage; establish a monitoring and management system to conduct regular survey on the ecological conditions, making full use of 3S technology and the remote monitoring system for land ecological security; strengthen the management of the red line, including the safeguard mechanism, assessment system, ecological compensation mechanism, ecological political achievements evaluation system, normalized ecological civilization propaganda and education and so on, bringing the resource consumption, environmental damage, ecological benefits and other indicators into the evaluation system of economic and social development thus making them an important orientation and constraint for the establishment of ecological civilization; establish an accountability system, those who cause serious consequences or bad influences to eco-environment shall be investigated and held accountable for a lifetime.

Third, accelerate the legislation, establish and perfect relevant laws and regulation system, and clarify its legal status, to provide legal support for the delineation. The authority and coerciveness of the red line should be reflected by means of the law. Environmental Protection Law is the basic law of the ecological civilization system construction. And in its revised version, the red line was, for the first time, written into the law, emphasizing that it is a compulsive regulation to protect eco-environment and prevent ecological risks, which confirmed its legal status. Local government or local legislation should make further delineation of red-line areas based on the national standard, and carry out more strict and specific implementation measures. Meanwhile, different standards and management measures should be made according to different areas, to conduct differentiated management and control; monitoring, supervision, management and accounting should be put into the construction of the regulatory system.

Forth, gradually establish inter-regional coordination mechanism, ecological compensation mechanism and public participation mechanism. The establishment of ecological compensation mechanism can play an important role in alleviating the contradiction between local economic and ecological protection, long-term interests and short-term development. Thus, compensation mechanism in the red-line areas should be gradually established to promote ecological protection in the compensated areas

through the clarification of compensation measures, standards, funding sources and channels; increase financial transfer payments, explore more diversified pattern of ecological compensation and support areas with relatively fragile eco-environment; in areas with both specified contributors and beneficiaries, establish a lateral compensation mechanism among different areas, according to the principle who benefits who compensates.

In addition, public participation mechanism should be introduced into the maintenance of the red line. As the subject of the rights and obligations of eco-environmental protection, public should get involved in every part of the work, especially in the legislation and environmental impact assessment of the development activity. In the meantime, strengthen the propaganda and education of environmental protection and ecological security to the public, making them want to and able to participate in the delineation, implementation and protection of the red line.

In summary, it is imminent for China to promote and implement the delineation of ecological protection red line, no matter in consideration of the national strategy or the local major demand. There are abundant reference provided by domestic and foreign successful experience and case studies. Meanwhile, thorough studies on the concept, connotation, methods, challenges and management of the red line have been carried out by relevant domestic universities and research institutions in recent years, which will play an important role in the promotion. As a unique product of China, the ecological protection red line has not only Chinese characteristics but also demonstrative values, which requires urgent support. It is not a dotted line but a full line. Related special funds and projects should be set for further studies to accelerate the improvement of delineation technology and the implementation of the work.

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