



Research on the Practical Path of Ecological Protection in National Space Planning

Yuanjin Huang*, Zhu Suyao^a

College of Liberal Arts and Law, Southwest Forestry University, Kunming 650000, Yunnan, China

*892250975@qq.com; ^a1421154270@qq.com

Abstract. At present, the connection between territorial spatial planning and ecological protection is insufficient, and it is difficult to promote the construction of ecological civilization through territorial spatial planning. Through the study of ecological protection, ecological protection and spatial planning, this paper points out that the ecological concept under the background of territorial spatial planning is insufficient, and it is difficult to give full play to the effectiveness of national management means. Finally, it is pointed out that the territorial spatial planning can promote ecological protection practice through the following three points: first, strengthen the legal construction of ecological protection, second, promote regional coordination by using territorial spatial planning, and third, strengthen the ecological protection concept in territorial spatial planning.

Keywords: Territorial planning, ecological protection, ecological protection rule of law, sustainable development

1 Introduction

The significance of implementing territorial spatial planning lies in the establishment of a unified, scientific and efficient national territorial spatial planning system with clear responsibilities and powers, the overall planning of the development and protection pattern of territorial space in the new era, the comprehensive consideration of population distribution, economic layout, land utilization, ecological environmental protection and other factors, and the scientific layout of "three life" space. Territorial spatial planning is not only an important means for a modern country to implement spatial governance, but also a spatial implementation plan for China to promote the construction of ecological civilization, and a key measure to promote high-quality development and high-quality life. How to use the territorial space planning to implement the concept of ecological civilization is so important.

2 National Spatial Planning and Ecological Protection

2.1 Definition and Connotation of Territorial Spatial Planning

Spatial planning is a spatial and temporal arrangement for the development and protection of a certain region's territorial space, including overall planning, detailed planning and related special planning. It is an important carrier to guide the country's spatial development and sustainable development

2.2 The Relationship Between Territorial Spatial Planning and Ecological Protection

Firstly, to promote ecological environmental protection, the rational development and utilization of land resources is one of the means of ecological environmental protection. Through land spatial planning, not only can effectively improve the effect of ecological environment governance, but also can realize the effective improvement of ecological environment. Through the adjustment of various dimensions such as the use of land resources in social life by the state, the development of stakeholders and the implementation of ecological maintenance goals are further promoted.

Secondly, if the development protection means are to implement the sustainable development goals, it must be based on the concept of development and solve the problems faced in the process of development. The territorial spatial planning has a highly open protection method, and the effective use of land resources to achieve the protection of land resources can not only realize the long-term maintenance of the relationship between economic development and resource utilization, but also can be based on effective regulation and control. To realize the purpose of improving the utilization rate of resources, to create unlimited development possibilities in limited land resources of our country.

Thirdly, as a populous country with a firm commitment to sustainable development, China has always adhered to the principle of "people first" and put people first. The way the state supports sustainable development based on land spatial planning and strengthens the ecological environmental protection of land spatial planning is not only for the public to obtain "temporary" happiness, but also for the long-term development of all mankind and for the benefit of future generations. Both the government and the public should start from the perspective of long-term development, reflect on the pollution and damage caused to the ecological environment in the past development process on the basis of deep thinking about the current ecological environment, change the original concept of land use, change the concept of economic development as the core content, and enhance the importance of ecological environment.

3 The Ecological Protection Mechanism in the Context of Spatial Planning is not Perfect

3.1 The Legal Degree of Ecological Protection is not Enough

The construction of ecological civilization needs to be better implemented through legal means. The current legal degree of ecological protection is not enough, and it often encounters obstacles in the practice process.

First, at the legislative level, ecological protection laws are scattered in different legal texts and lack a clear legal basis in the face of some important ecological issues, but the ecological environment code is currently in the legislative process and will be called an objective code of ecological legalization in the near future.

Second, at the law enforcement level, the enforcement of ecological protection is insufficient, and many illegal acts can not be punished and prevented in a timely and effective manner, so it will cause permanent damage to the ecological environment, and it is difficult to play the role of law enforcement supervision in the context of imperfect law enforcement mechanisms.

Third, at the judicial level, there are problems such as insufficient relief, difficulty in the execution of judgments and insufficient judicial independence. Territorial spatial planning cannot guarantee relief channels for ecological protection, which is easy to damage the legal status and stability of territorial space, and it is also easy to encounter various difficulties in the implementation stage after the ruling. Judicial organs may receive influence from local governments or other interest groups, which affects the fairness of judicial decisions.

3.2 Lack of Regional Coordination in Ecological Governance

The lack of regional coordination in ecological governance is mainly due to the inconsistency of policies and regulations, the obvious conflict of interests, the unreasonable allocation of resources, and the imperfect coordination mechanism. First, in terms of regional coordination, this paper mainly describes the regional coordination between neighboring provinces and cities, while the Legislation Law clearly states that cities with districts have the right to legislate on ecological environment. There may be differences in policies and regulations between different regions, which are caused by the development goals and actual conditions of different regions, and such differences cannot be changed.

The goal of regional coordinated ecological governance can only be achieved by exploring innovative coordination mechanisms in various regions. Second, different regions have conflicts of interest in terms of economic development level, resource utilization efficiency and ecological protection. Some regions may sacrifice the ecological environment for economic development, while some places pay more attention to ecological protection due to the preference of leaders or the level of national attention. Such conflicts of interest make it difficult to reach a consensus on ecological governance among regions, resulting in the lack of regional coordination. Ecological govern-

ance requires multi-departments and multi-regions to work together to alleviate conflicts, and the current coordination mechanism has problems such as unclear division of responsibilities between departments, poor communication, and weak coordination. All of these problems will lead to insufficient coordination of ecological governance.

3.3 The Content of Ecological Protection in National Spatial Planning is Insufficient

Land is the spatial carrier and material basis for ecological progress, and every inch of land must be cherished. We will strictly implement the pattern of major agricultural production areas, key ecological functional zones, and urbanization areas set out in the Outline of the National Territorial Space Plan (2021-2035), deepen the implementation of the "1+3" key functional zones, improve the strategic pattern of functional zones combining land and sea, and adhere to the concept of "ecological priority, agglomeration of belts, and open hinterland" for spatial development and protection. The theory of ecological civilization requires that we must control the intensity of development and adjust the spatial structure in accordance with the principle of balancing population, resources and the environment and unifying economic, social and ecological benefits, so as to promote intensive and interesting production space, livable and moderate living space, and beautiful ecological space, so as to leave more space for the restoration of nature and more fertile land for agriculture.

Leave a beautiful home with blue sky, green mountains and clear water for future generations. The most basic requirement of land space planning is overall planning. To improve the modernization of land space governance, it is necessary to establish a land space planning system, strengthen space use control, integrate the theory of ecological civilization into the whole process of land space planning, and establish land space development and protection systems, farmland protection systems, water resources management systems and environmental protection systems in a planned and step-by-step manner.

3.3.1 Application of The Theory Social Development

An important significance of the formulation and implementation of territorial spatial planning is to coordinate the relationship between social development and ecological protection. Therefore, the study of ecological protection of territorial planning is inseparable from the elaboration of social development theory.

The development of human society and human development are also corresponding, and the development history of human society can also be called the development history of the relationship between man and nature. Human society has experienced three forms of civilization: hunting civilization, agricultural civilization and industrial civilization. The current development direction of civilization can be summarized as "ecological civilization" or sustainable development civilization.

In 1987, the United Nations Commission on Environment and Development put forward the concept of "sustainable development" in the report "Our Common Future", and it has been widely recognized in the following decades. Although the principles of

development, harmony and equity in sustainable development theory are still applicable at present, compared with ecological civilization, sustainable development strategy is still a strategic model based on human center. China's current green development mode should jump out of the shackles of anthropocentrism, which is the inevitable requirement of realizing harmony between man and nature. The anti-anthropocentrism of environmental law does not deny the dominance of human beings and the fact that human beings are the managers of nature, but wants us to lower our arrogant heads. Professor CAI Shouqiu once said in his book: "Admit that human beings are morally responsible for environmental problems and ecological destruction; Recognizing the interaction between man and nature; To acknowledge that what man does to nature, he does to himself, that is, the unity of man and nature"[1].

The development of society has both opportunities and risks. The economic model of rapid development in the past has not been recognized, and the ensuing ecological crisis has forced us to put our perspective on the risk society theory. The concept of "risk society" was first put forward by German sociologist Ulrich Beck. In Beck's view, only when "risk" is strong enough to affect people's lives, and the risk has changed fundamentally compared with the past, can it be called "risk society"[2]. Compared with past risks, one of the characteristics of modern risks is wholeness [3].

Traditional risks have little impact and are basically limited to specific individuals and social groups, while modern risks are threats to unspecified groups of people or to humanity as a whole. If the traditional risk is specific and known, and people can resist it by relying on the strength of the group, then the risk in modern society is unpredictable and resistant to human beings [4]. In the face of modern risks, human beings should actively cope with the ecological crisis, and the preparation and strict implementation of territorial spatial planning is a great initiative. According to the real situation of China's society, economy, culture and environment, the policy guidance for the preparation of territorial spatial planning is introduced from the top level, and the preparation of territorial spatial planning starts from the grassroots level ("multi-planning"), and then the provincial level carries out unified preparation. It was then submitted to The State Council for approval. Such a process is adapted to the situation of our country, although in the process of preparation and implementation will encounter various problems, but this is a step by step to promote and improve the work.

3.3.2 The Phased Achievements of National Spatial Planning in Ecological Protection

Since it was proposed, the planning of land space has made brilliant achievements in theory, legal system and practice. The gradual improvement of the planning system of land space has also made great contribution to the construction of ecological civilization of our country. Mountains, rivers, forests, fields, lakes, grass and sand are a community of life. We will ensure integrated protection and systematic management of mountains, rivers, forests, fields, lakes, grasslands and sand, and build a general pattern of protection and management from mountaintops to oceans. The community with a shared future for mankind.

In terms of the legal system for ecological protection, the Nation has promoted the construction of ecological civilization with the rule of law thinking and method, institutionalized and standardized the construction of ecological civilization, and built a scientific, rigorous and systematic legal system for ecological environmental protection. By writing "ecological progress" into the Constitution, we have enacted the Yangtze River Protection Law, the Yellow River Protection Law, the Qinghai-Tibet Plateau Ecological Protection Law and other laws to ensure ecological security, and revised the Environmental Protection Law, the Land Management Law, the Forestry Law and other laws to protect and improve the environment.

In terms of ecological protection practice, territorial spatial planning is the action guide for the development, protection, restoration and management of all land resources. Only a sound and perfect feasible plan suitable for national conditions can truly implement all aspects of land resources development, utilization and protection. China has vigorously implemented a number of ecological and environmental restoration projects, including protection and restoration of shelterbelts and natural forests, return of farmland to forests and grasslands, ecological restoration in mines, and the "Blue Bay" improvement campaign. We have carried out large-scale national afforestation campaigns to continuously increase the area of forests, grasslands, wetlands, rivers and lakes, and effectively reversed the trend of land desertification.

4 Realization Path of Ecological Protection in Spatial Planning

4.1 Strengthen the Legalization of Ecological Protection

Ecological protection needs legal means to guarantee the national coercive force. To start with, the formulation of the ecological environment code is needed by The Times, and it can be promoted by the codification of environmental protection, and strengthen the coordination and cohesion of ecological protection clauses scattered in different laws. And then, in terms of ecological and environmental protection, territorial spatial planning should strengthen law enforcement, improve law enforcement mechanisms, and improve the efficiency of law enforcement. For example, in the personnel training and work allocation of the Ministry of Natural Resources, the content of law enforcement work can be detailed, from the central to local communication and guidance, from the national level to clarify the main points of law enforcement work, difficulties and obstacles encountered in grassroots practice should be actively fed back to the superior, forming a bottom-up and top-down information circulation channel, and obtaining correct experience from practice. In order to better feedback lessons that can be replicated to achieve scientific law enforcement. Finally, we should strengthen the enforcement of judicial decisions and ensure that the rights and interests of victims are protected.

4.2 Promoting Regional Coordination Through Territorial Planning

In the face of ecological damage, ecological pollution and other problems in territorial spatial planning. On the one hand, it is necessary to strengthen the communication between various departments, and carry out content analysis of specific situations based on the corresponding control conditions of various departments. On the other hand, it is necessary to promote communication and exchanges between regions to promote regional sustainable development goals.

First, we need to improve the regional governance system for the ecological environment. The efficient implementation of a policy and measure requires that the realization mechanism of various ecological environmental zoning systems be studied from six aspects: legislation, technical standards, power definition, performance evaluation, data services, and related measures. In the promotion path of ecological and environmental zoning governance, we should: Under the guidance of the unified strategic concept of continuous improvement of environmental quality, governments at all levels set environmental governance tasks and effectiveness targets in different time and space in accordance with the principle of clear powers and responsibilities, and implement precise policies according to local conditions. They pay attention to the comprehensive use of economic, legal and technological means, encourage and guide enterprises to independently carry out environmental protection, and introduce civil groups to participate in checks and balances. While improving governance capacity, more emphasis is placed on governance performance to ensure both quantity and quality of ecological environmental protection^[5]. First of all, accelerate the ecological environment zoning control legislation, strengthen the top-level design, and actively promote the national and local level ecological environment zoning control legislation based on "three lines, one order"^[6]; Secondly, the research on environmental quality bottom line should be strengthened to realize the effective connection between environmental factors and the "three lines, one order". The determination of environmental quality bottom line should fully connect the environmental quality objectives and the deadline requirements of relevant planning, and reasonably determine the environmental quality bottom line in different regions and stages^[7]. Thirdly, the "three lines, one order" should be incorporated into the existing environmental access system, and the full connection between "three lines, one order", planning EIA and project EIA should be strengthened, which is not only an important way to realize the implementation of "three lines, one order", but also an important way to improve the management effect of environmental access system^[8]. Finally, promote the further connection between "three lines, one single order" and territorial spatial planning, clarify the connection rules between territorial spatial planning and "three lines, one single order", propose to introduce laws, regulations and management regulations to further clarify the connection rules between territorial spatial planning and "three lines, one single order", promote the information construction of "three lines, one single order", and realize the sharing of results data^[9].

Second, clarify the division of functions of departments. Under the background of the development of the new era, we must promote the reform of the government management system. In the territorial spatial planning, the specific work responsibilities of

various organs are clarified, the effective coordination among organs is strengthened, and all work can be effectively carried out through reasonable overall planning. At the same time, the relevant departments of territorial and spatial planning should also be aware of the importance of promoting system changes, further clarify the specific responsibilities of various organs, and through efficient coordination among organs, form an international cooperation platform led by the territorial and spatial planning organs, and efficiently solve various problems in accordance with the new provisions of the relevant national management system. Many contradictions in traditional national management can be effectively overcome, so as to promote the development of spatial structure planning and management to become more reasonable and orderly [10].

Then, adhere to the "two-wheel drive" of ecological engineering construction and institutional innovation. For a start, always on the basis of China's rural land consolidation engineering system, gradually establish national, provincial and ministerial land consolidation key projects based on key areas of land consolidation and guided by engineering classification, and regional land consolidation model province - ecological farmland demonstration zone - standardized farmland construction demonstration county project management system. As an important carrier for the realization of national ecological goals, rural land renovation and governments at all levels in different areas of the country to point to the demonstration model, while constantly improving the land renovation planning and design, technology, quality management, investment management and project implementation performance standards and norms system. In addition, to strengthen the macro-control of the overall plan, rural land consolidation should be planned first, and special plans should be prepared according to certain administrative regions, objectives and tasks, and planning timing, or the planning contents should be integrated into the overall territorial space planning, ecological restoration and comprehensive land consolidation special plans, etc., as programmatic documents leading the local rural land consolidation in a certain period of time in the future. Give full play to planning, guidance and coordination [11]. Next, it fully mobilizes the innovation vitality of local governments, and breaks the current government innovation path of simple and existing government and mechanical segmentation from both time and space dimensions [12]. The government should focus on the practical problems of natural resources management, explore and experiment with land consolidation practice, and elevate land consolidation practices such as standardized cultivated land construction, urban and rural construction land increase and decrease, urban and rural inefficient land consolidation, low-hill and low-slope unused land development, and land consolidation for industrial and mining construction projects into national systems. It has realized the positive interaction of finance, market and community in the three aspects of joint governance, effectively integrated local financial funds, absorbed market funds, and actively guided the public to invest resources, laying a cornerstone for the sustainable development of land consolidation.

Last, increase the integration of the ecological protection red line system and spatial planning, combine the current development status, actively explore the innovation of management, and promote the improvement of integration. Because many traditional

management methods are no longer suitable for current development requirements, ecological space is currently transformed at will. China has strict regulations on the red lines of ecological protection such as cultivated land and forest land, while the red lines of ecological protection such as wetland, desert, water area and sandy land are relatively weak. As a result, local governments transform and develop ecological Spaces such as mountains, wetlands and lakes after using up the indicators of agricultural land conversion^[13]. Therefore, in the new era, the territorial spatial planning department needs to explore various problems in the planning process, combine the results of double evaluation, and carry out supplementary zoning in the ecologically important areas that have not been drawn into the red line or the peripheral areas of the former natural protection areas, so as to maintain the integrity of local ecosystems. There is no concept of ecological redline in China, but a lot of work has been done on ecological vulnerability/sensitivity^{[14][15]}.nature reserve design and site selection^[16], which can provide a reference for the study of ecological redline delineation technology in China.

In addition, the key contents of the territorial spatial planning were comprehensively analyzed, and the basic database based on ecological protection red line within the scope of ecological protection was improved^[17] on the basis of the territorial spatial planning database to promote the organic integration of planning contents. In the process of management innovation, it is necessary to proceed from the actual development situation in the region, constantly innovate and improve, establish a sound planning mechanism, and then ensure that all the work of ecological environmental protection can be carried out in a more orderly manner.

4.3 Enhance the Concept of Ecological Protection in National Space Planning

Reasonable and orderly ecological spatial pattern plays an important role in supporting natural life systems, maintaining ecological security and realizing orderly and rational spatial allocation^[18]. Although ecological protection issues run through the territorial spatial planning, the implementation of ecological protection red lines and the optimization and adjustment of ecological protection space is an important prerequisite for territorial spatial planning:

4.3.1 Pay Attention to Ecological Restoration Planning

In the practice stage of national land spatial planning, relevant departments should fully consider the actual situation of ecological environment in different regions, choose a reasonable treatment method for ecological environment restoration, strengthen the follow-up of the implementation of the restoration work plan, and strengthen the penetration of the fine work concept to ensure more significant ecological restoration effects. Through scientific and professional support, the coordination goal of ecological space can be realized.

4.3.2 Attach Importance to the Coordination of Ecological Red Lines

In the process of spatial coordination, the coordination of ecological red lines must be fully considered. It is necessary to fully introduce information technology, give full play to the functions of information technology, use computer three-dimensional space technology to realize dynamic simulation of ecological fragile areas and important ecological functional areas, and generate scientific ecological red line distribution map through analysis of simulation results to ensure that ecological space has a high degree of coordination and effectiveness. In addition, ecological redlines are not only the bottom line of ecological security, but also the lifeline for the poor to survive^[19]. Lucid waters and lush mountains are invaluable assets, and there would be no invaluable mountains without lucid waters and lush mountains.

4.3.3 Strengthen the Control of Ecological and Environmental Use

In practice, it is necessary to grasp the direction of policy development, summarize the good experiences and practices of local practices in a timely manner, coordinate various elements of space use control tools, strengthen the effective connection between land space use control and existing space policies, constantly improve administrative, economic, legal, technical and other means, and embed the land space use control system into the existing policy system. Improve the performance of spatial regulation of land use [20].

5 Conclusion

Based on the current problem of insufficient connection between territorial spatial planning and ecological protection, this paper first analyzes the concepts of territorial spatial planning and ecological protection, and clarifies that the relationship between the two sides should strengthen the protection of the ecological environment through scientific territorial spatial planning. Territorial spatial planning should be relatively stable, and more attention should be paid to sustainable development. Secondly, the ecological protection mechanism has not been highlighted in territorial spatial planning, and its lack of legitimacy makes it difficult to play a legal role in ecological protection. Although the protection of champions requires not only the use of legal means, but also the strengthening of public participation, in the process of society still needs to seek development, it is not enough to guarantee without strong government management, legal control and policy guidance. Based on the above, the path to the realization of ecological protection in spatial planning should be divided into three steps: first, strengthen the legalization of ecological protection; Second, promoting regional coordination through territorial planning; Third, Enhance the concept of ecological protection in national space planning.

References

1. CAI Shouqiu. Theory of Adjustment: Reflection and Supplement to Mainstream Jurisprudence [M]. Beijing: Higher Education Press, 2003, 119.(in Chinese).
2. Ulrich Beck.Risk Society [M], Translated by He Bowen, Nanjing: Yilin Publishing House, 2004, 20.
3. Wu Xianjing. "Ecological man" : The image of man in Environmental Law [M]. Beijing: China Renmin University Press, 2014, 157.(in Chinese).
4. Wu Xianjing. "Ecological Man" : The image of man in Environmental Law [M]. Beijing: China Renmin University Press, 2014, 158.(in Chinese).
5. Liu G L, Qiu J. Improving the ecological environment zoning governance system and building a modern environmental governance system [J].Environmental Protection, 2019,48(06):45-49.(in Chinese).
6. Ecological environment on the implementation of the "three line a single" ecological environment subarea control guidance (trial) "[EB/OL]. HTTP: // https://www.gov.cn/gongbao/content/2022/content_5683858.htm.(in Chinese).
7. Tang Li-yun, Chen Haisong.Some thoughts on Deepening the application of ecological environment zoning control system [J]. Environmental Pollution and Control,2023,45(04):583-588. (in Chinese)
8. Yang Junjie, Fang Hao. Exploration on the application mechanism of the "three-line, one-order" ecological environment zoning control system [J].Environmental Protection, 2021 (9) : 40-43.(in Chinese).
9. Geng Haiqing. Analysis on the positioning of "Three lines, one order" in China's spatial planning system [J]. Environment and Sustainable Development, 2019 (5) : 78-82.(in Chinese).
10. Yan Pei, ZHAO Yichen, Qiao Yang.Research on ecological environment protection under territorial spatial planning [J]. Urban Architecture Space,2022,(08):164-166.(in Chinese).
11. Hu Wei, Liao Xiaofeng, Yu Long et al.Ecological and environmental risks of rural land consolidation and its control countermeasures [J]. Agriculture and Technology,2023,43(13):98-102. (in Chinese).
12. Li Zhaoyou, DONG Jian. Research status and Prospect of government innovation process [J]. Journal of Beijing Institute of Technology (Social Sciences),2016, 18(04):94-101.(in Chinese).
13. Huang Z X. Qi F. From land use control to space use control: Problems and countermeasures.[China Land, 2018 (06) : 22-24.(in Chinese).
14. Ebenman B,Jonsson T.Using community viability analysis to identify fragile systems and keystone species.Trends in Ecology&Evolution,2005,20(10):568-575.
15. Bergengren J C,Waliser D E,Yung Y L.Ecological sensitivity:a biospheric view of climate change.Climate Change,2011,107(3/4):433-457.
16. Halpern B S,Lester S E,McLeod K L.Placing marine protected area onto the ecosystem-based management seascape.Proceeding of the National Academy of Sciences of the United States of America,2010,107(43):18312-18317.
17. Mo Zhangqin. Theoretical proof and practice of red line system for ecological protection in China. Resources and Environment in the Yangtze Basin,2019,28(10):2484-2490.(in Chinese).
18. FangYishu, Zu Jian, Ai Dong et al.Evaluation on the importance of ecological protection in Kunming City for territorial spatial planning [J]. Journal of China Agricultural University, 201,26(03):152-163. (in Chinese).

19. COMIM,KUMAR P,SIRVEN N.Poverty and environment links:an illustration from Africa[J].Journal of international development,2009,21(3):447-469.
20. Huang Zhengxue, JIANG Renkai, WU Jiuxing.Evolution, development trend and policy innovation of land use regulation [J]. China Land Science,2019,33(06):1-9. (in Chinese).

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

