

# On Enhancing the System of Major Function-Oriented Zones in Guangxi

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**Abstract:** This present study provides an in-depth exploration of the system of major function-oriented zones in Guangxi, offering a comprehensive analysis of its present state and the hurdles it encounters and presenting targeted strategies for refinement. Its objective is to vigorously foster coordinated regional development in Guangxi, bolster ecological and environmental safeguards, attain sustainable economic expansion, and furnish both theoretical and practical insights for the advancement of the major function-oriented zone system.

**Keywords:** Guangxi; Major Function-Oriented Zones; System; Ecological Protection; Strategy

## 1. Introduction

The strategy of major function-oriented zones stands as a cornerstone strategic initiative in China's pursuit of harmonizing regional development and optimizing the spatial configuration of land utilization, carrying profound implications for the nation's overarching development trajectory. Within the realm of regional development, each area assumes distinctive functional responsibilities, shaped by its unique resource endowments, developmental foundations, and other pertinent factors, collectively forging a collaborative and forward-moving development paradigm [1]. Guangxi, with its distinctive geographical setting, plentiful natural assets, and vibrant cultural milieu, assumes a pivotal role in the broader tapestry of national regional development. Optimizing the system of main functional zones is a key path for Guangxi to tap its own potential and unleash its development vitality. For one thing, Guangxi is endowed with an abundance of natural resources, encompassing marine resources in the Beibu Gulf, distinctive economic forests that rank among the nation's

largest in terms of area, mineral resources in western Guangxi, and ecological tourism resources dispersed throughout the region. For another, as the conflict between economic development and ecological protection becomes increasingly prominent, precisely coordinating the relationship between the two has become an urgent priority. A scientifically sound system of major function-oriented zones can help Guangxi find a balance between economic growth and ecological preservation, achieving coordinated regional development and enabling Guangxi to play a more significant role in the national regional development landscape. Hence, it is of great significance to conduct research on improving the system of major function-oriented zones in Guangxi, which involves refining the strategic implementation of major function-oriented zones, detailing the functional subdivisions, enhancing relevant supporting policies, facilitating precise spatial governance, and promoting the formation of a new pattern for the development and protection of territorial space.

## 2. Division of Major Function-Oriented Zones in Guangxi

Based on multi-dimensional factors such as resource and environmental carrying capacity, existing development intensity, and development potential, Guangxi has massively optimized its system of major function-oriented zones. Taking counties (cities, districts) as units, the entire region is divided into a national and autonomous region-level "3+3" functional system, comprising three basic types—urbanized areas, major agricultural product production areas, and key ecological function areas—superimposed with three special categories: key border development areas, strategic mineral resource security areas, and resource-exhausted cities. National-level urbanized areas are concentrated in six cities around the Beibu Gulf, namely

Beihai, Qinzhou, Fangchenggang, Chongzuo, Yulin, and Nanning's seven urban districts, as well as Hengzhou, the entire territory of Beihai, two urban districts of Qinzhou and Lingshan, two urban districts of Fangchenggang and Dongxing, Beiliu-Fumian-Yuzhou in Yulin, and Jiangzhou-Fusui-Pingxiang in Chongzuo, forming the core of the marine economy. The main urban areas of the sub-centers, Guilin and Liuzhou, are only classified as autonomous region-level urbanized areas. The plain grain production areas in central and southeastern Guangxi continue to be designated as major agricultural product production areas, while the ecologically sensitive regions in western and northern Guangxi are classified as key ecological function areas, implementing industrial access negative lists and ecological compensation mechanisms, and allowing for further refined management and control of permanent basic farmland or ecological red line areas at the township level [2]. A total of 174 prohibited development areas (accounting for 11.4% of the region's area) maintain a scattered distribution, with strict prohibitions on industrialization and urbanization expansion within the red lines.

### **3. Problems Existing in the System of Major Function-Oriented Zones in Guangxi**

#### **3.1 Inadequate Implementation and Coordination of Planning**

Some regions have failed to strictly adhere to the planning of major function-oriented zones for development and construction, resulting in ambiguous functional positioning and irrational industrial layouts. There are cases of over-development in some restricted development areas. To pursue short-term economic gains, some localities have engaged in large-scale mineral exploitation or disorderly tourism development in ecologically fragile mountainous areas. This has not only damaged the local ecological environment, causing problems such as soil erosion and a reduction in biodiversity, but has also seriously impaired the effective functioning of ecological functions and threatened regional ecological security.

The coordination and development mechanisms among different major function-oriented zones and with surrounding areas are still imperfect. There is a lack of efficient and effective communication and collaboration in key areas

such as infrastructure construction, industrial cooperation, and ecological protection across regions. In terms of infrastructure construction, traffic connections between adjacent major function-oriented zones are poor, and the road grades between some key development areas and restricted development areas are low, affecting the flow of goods and personnel between regions. In industrial cooperation, there is a lack of effective docking platforms and cooperation mechanisms, making it difficult to combine the industrial advantages of key development areas with the resource advantages of restricted development areas, thus preventing mutually beneficial cooperation. Regarding ecological protection, there is a lack of cross-regional ecological protection coordination mechanisms [3]. When ecological and environmental problems arise, regions shift responsibility onto one another, failing to form a joint effort for governance.

#### **3.2 Deficiencies in Policy Implementation and Evaluation**

During the implementation of some policies, there is an unreasonable "one-size-fits-all" phenomenon that fails to fully consider the actual situations and differences among various major function-oriented zones, resulting in unsatisfactory policy implementation effects. Some ecological compensation policy standards are not scientific and reasonable enough, failing to fully take into account factors such as the ecological value of different regions, the costs of ecological protection, and the economic losses suffered by local residents due to restricted development. In some restricted development areas with important ecological functions but relatively backward economies, low ecological compensation standards make it difficult to effectively stimulate the enthusiasm of local residents and governments for ecological protection, and may even lead some residents to engage in activities that damage the ecosystem to make a living [4].

Given the lack of a sound policy assessment and dynamic adjustment mechanism, it is difficult to detect problems that arise during the policy implementation process promptly, and thus adjustments and optimizations cannot be made promptly. To a certain extent, this has affected the effective implementation of the main functional zone system at present, policy assessment mainly relies on self-evaluation

within the government, lacking the participation of independent third-party assessment institutions. As a result, the assessment outcomes are often subjective and one-sided. Given the lack of a regular policy monitoring mechanism and insufficient data collection and analysis during the policy implementation process, it is difficult to promptly detect deviations in policy execution, resulting in some policies that are not in line with the actual situation being implemented for a long time, which has affected the policy effect.

### **3.3 Contradiction between Ecological Protection and Economic Development**

Restricted and prohibited development areas face dual pressures from ecological protection and economic development. Due to restrictions on industrial development, the income growth of local residents has been relatively slow, and the contradiction between poverty alleviation and ecological protection is prominent. In some restricted development areas, traditional agricultural production methods are unable to meet residents' demands for income growth, while industrial development is restricted by ecological protection. Although the development of ecological industries is encouraged, due to a lack of support in terms of funds, technology, and market channels, the development of ecological industries has been slow and unable to effectively drive an increase in residents' incomes. For example, some mountainous areas have developed ecological tourism, but due to inadequate infrastructure and a single range of tourism products, the number of tourists is limited, making it difficult to achieve economic benefits.

In the process of economic development in some areas, insufficient attention has been paid to ecological and environmental protection, and there is a bad phenomenon of sacrificing the environment for short-term economic growth, which has a negative impact on the realization of the strategic goals of major function-oriented zones. Some local governments, in pursuit of GDP growth, lower environmental access thresholds during investment attraction and introduce some high-pollution and high-energy-consuming projects. Although these projects can bring certain economic benefits in the short term, they cause serious damage to the local ecological environment, increase the cost of environmental governance in the later stage, and also violate the

requirements for ecological protection in the planning of major function-oriented zones.

## **4. Strategies for Improving the System of Major Function-Oriented Zones in Guangxi**

### **4.1 Strengthen Planning Implementation and Regional Coordination**

Increase efforts to publicize and train on the planning of major function-oriented zones to enhance the depth of understanding and recognition of the planning among governments at all levels and enterprises, ensuring its strict implementation [5]. Firstly, through organizing special lectures, training courses, and other forms, interpret the connotations, goals, and specific requirements of the planning of major function-oriented zones for government officials, enterprise managers, and relevant practitioners, so that they can fully recognize the importance and seriousness of the planning. Secondly, make extensive use of media and the Internet to publicize the significance and content of the planning of major function-oriented zones, raising the awareness and participation of the general public and forming a good atmosphere in which the whole society abides by the planning. Thirdly, establish and improve a planning implementation supervision mechanism, set up a special planning supervision agency, and strengthen daily supervision and inspection of the implementation of the planning. Seriously deal with violations of the planning and hold relevant responsible persons accountable in accordance with the law to ensure the authority and seriousness of the planning.

Further improve the regional coordinated development mechanism and strengthen communication and collaboration among different major function-oriented zones and with surrounding areas. With respect to infrastructure construction, formulate a coordinated development plan for regional infrastructure, clarify the priorities and directions of infrastructure construction in each major function-oriented zone, and increase investment in transportation, energy, communication, and other infrastructure connecting different regions to achieve interconnection [6]. Plan and construct expressways, railways, and other transportation arteries to strengthen traffic links between key development areas and restricted development areas and improve the efficiency of material transportation and personnel flow. In

terms of industrial cooperation, establish a regional industrial cooperation platform, regularly hold industrial docking meetings, investment promotion events, etc., to promote the combination of the industrial advantages of key development areas and the resource advantages of restricted development areas. Encourage enterprises in key development areas to transfer industries to restricted development areas to drive local industrial development and achieve mutually beneficial cooperation. In terms of ecological protection, focus on establishing a cross-regional ecological protection linkage mechanism, set up a cross-regional ecological protection coordination agency, and clarify the responsibilities and divisions of labor of each region in ecological protection. Enhance regional ecological environment monitoring, information sharing, and joint law enforcement to jointly address ecological and environmental problems. Establish a unified ecological environment monitoring network, share monitoring data in real time, and conduct joint investigations and handling of cross-regional environmental pollution incidents.

#### **4.2 Optimize the Policy System and Evaluation Mechanism**

Formulate more precise and differentiated policies, and flexibly adjust fiscal, investment, industrial, land, and other policies based on the characteristics and needs of each major function-oriented zone. For restricted development areas, increase ecological compensation efforts and raise compensation standards. Take full account of factors such as the ecological value of the region, the costs of ecological protection, and the economic losses suffered by local residents to establish scientific and reasonable compensation standards [7]. Explore diversified ecological compensation methods. In addition to financial compensation, compensation can also be provided through industrial support, technical assistance, and ecological resettlement. For key development areas, formulate more attractive industrial support policies. Based on the industrial positioning and development direction of the region, introduce targeted preferential policies such as tax reductions and exemptions, financial discounts, and land incentives to attract high-quality enterprises and projects, promoting industrial agglomeration and development. Support policies for different industries should

have different emphases. Encourage the development of high-tech industries and strategic emerging industries to drive the optimization and upgrading of the industrial structure.

Set up and improve a policy evaluation mechanism, conduct comprehensive evaluations of policy implementation effects on a regular basis, promptly identify policy issues, and make adjustments and optimizations. Introduce third-party evaluation agencies to enhance the objectivity and scientific nature of evaluations. Third-party evaluation agencies should possess professional evaluation capabilities and rich evaluation experience, enabling them to independently and impartially evaluate policy implementation effects. During the evaluation process, employ a combination of quantitative and qualitative analysis methods to comprehensively assess policy goal achievement, economic benefits, social benefits, and environmental benefits. Strengthen dynamic policy adjustments and promptly adapt the policies for major function-oriented zones in accordance with regional development changes and national strategic requirements [8]. Establish a policy adjustment feedback mechanism to promptly provide evaluation results to policy-making departments. Based on the feedback, policy-making departments should revise and improve policies to ensure that they consistently meet actual development needs.

#### **4.3 Promote the Coordinated Development of Ecological Protection and the Economy**

In restricted and prohibited development areas, actively explore eco-friendly industrial development models, vigorously develop eco-tourism, characteristic eco-agriculture, etc., and achieve an organic integration of ecological protection and economic development [9]. Increase support for ecological industries in these regions, cultivate new economic growth points, and effectively raise the income levels of local residents. For the eco-tourism industry, the government should increase investment in infrastructure construction, build tourist roads, improve scenic spot environments, and enhance tourism service facilities. Strengthen tourism brand building and promotion to enhance the region's tourism profile. In terms of characteristic eco-agriculture, provide technical support and financial assistance to guide farmers in adopting eco-friendly planting and breeding

techniques and developing organic agricultural products and specialty fruit and forestry industries. Encourage the establishment of agricultural cooperatives to improve the organizational level of agricultural production, expand agricultural product sales channels, and increase farmers' incomes.

Strengthen oversight of ecological and environmental protection throughout the economic development journey. Establish rigorous environmental access frameworks and ramp up enforcement of environmental laws to guarantee that economic growth does not occur at the environment's cost. Develop stringent environmental access criteria, carry out thorough environmental impact assessments for new projects, and bar the entry of highly polluting and energy-guzzling initiatives. Enhance environmental monitoring of existing businesses, press them to embrace eco-friendly technologies and processes, and achieve tangible reductions in pollutant discharges [10]. Set up and refine an environmental law enforcement oversight system, bolster the development of the environmental law enforcement workforce, and elevate the professional skills and enforcement abilities of law enforcement staff. Impose harsher penalties for environmental infractions and rigorously punish lawbreaking enterprises in line with legal provisions to create a powerful deterrent against environmental misconduct. Actively champion the green transformation of industries, inspire enterprises to adopt environmentally sustainable technologies and processes, undertake cleaner production practices, enhance resource utilization efficiency, and minimize pollutant emissions. The government can steer enterprises towards boosting their investment in the research and utilization of environmental protection technologies through policy tools such as financial subsidies and tax incentives, propelling industries towards a green, low-carbon, and circular development path.

## 5. Conclusion

Optimizing the system of major function-oriented zones in Guangxi is a long-term and complex systematic endeavor of great significance. It plays a pivotal role in promoting coordinated regional development, strengthening ecological and environmental protection, and achieving sustainable economic growth in Guangxi. By implementing strategies such as

reinforcing planning implementation and regional coordination, optimizing the policy system and evaluation mechanism, and promoting the coordinated development of ecological protection and the economy, we can effectively address the existing issues in Guangxi's current major function-oriented zone system. This will drive the continuous improvement of the construction of major function-oriented zones in Guangxi, enabling the coordinated advancement of the economy, society, and ecological environment. Looking ahead, as the economy and society evolve and the ecological and environmental situation changes, it is essential to closely align with Guangxi's actual development conditions and national strategic requirements. Continuous exploration and innovation of the major function-oriented zone system are needed to provide a solid foundation for Guangxi's high-quality development. By constantly adapting to new development demands, optimizing functional layouts, and enhancing the effectiveness of the system, Guangxi can achieve the goals of economic prosperity, a beautiful ecological environment, and social harmony in regional development.

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## References

- [1] Wu Z. Y., Shan J. J., Hao Q. Study on the Strategic Optimization of Major Function-Oriented Zones During the "14th Five-Year Plan" Period. *Development Research*, 2025, 42(07): 16-24.
- [2] Qi F., Xie X. Z., Kao Y. M., et al. Analysis on Improving the Institutional System of Major Function-Oriented Zones. *China Land*, 2025, (07): 44-48. DOI: 10.13816/j.cnki.ISSN1002-9729.2025.07.11.
- [3] Tian C. H., Qi F., Zhao C. S. P. Discussion on the Strategic Optimization of Major Function-Oriented Zones in the New Era. *Urban and Rural Planning*, 2023, (05): 1-8.
- [4] Huang K., Zhang H. O., Li S. F., et al. Adjustment and Optimization of Provincial-Level Major Function-Oriented Zones Based

- on "Dual Evaluations". *Journal of Natural Resources*, 2025, 40(08): 2092-2103.
- [5] Jia K. J., Qi F., Zhao C. S. P., et al. Study on Technical Methods for Optimization and Improvement of Major Function-Oriented Zones. *Land and Resources Guide*, 2024, 21(01): 9-16. DOI: 10.20147/j.cnki.gtzydk.2024.01.002.
- [6] Shi F. H. Refining and Implementing the Strategy and Institutional Construction of Major Function-Oriented Zones: Practice and Reflections in Fujian. *Fujian Construction Science & Technology*, 2023, (06): 1-3.
- [7] Luo X., Shao H., Cao M. Z., et al. Study on the Refinement Ideas of Major Function-Oriented Zones Under the Territorial Spatial Planning System: A Case Study of Jiangxi Province. *Territory & Natural Resources Study*, 2025, (03): 7-11. DOI: 10.16202/j.cnki.tnrs.2025.03.002.
- [8] Liu Y. Q., Deng Y. W., Zhang B., et al. Construction and Optimization of the Management System for Major Function-Oriented Zones in Jilin Province. *Planners*, 2024, 40(S1): 8-13.
- [9] Qi F., Xie X. Z., Shi Q. X., et al. Discussion on Constructing a "Spatial Integration" National Strategic System Based on Major Function-Oriented Zones. *China Land*, 2024, (11): 42-46. DOI: 10.13816/j.cnki.ISSN1002-9729.2024.11.11.
- [10] Fan J. Economic Geography Discussion on "Improving the Institutional System of Major Function-Oriented Zones". *Economic Geography*, 2024, 44(08): 1-7. DOI: 10.15957/j.cnki.jjdl.2024.08.001.