

Research on the Practice of Territorial Space Planning under the Perspective of Co-governance

Yi Zhang*

ID Card No. 15010320010419****

*Author to whom correspondence should be addressed.

Copyright: © 2025 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: Against the backdrop of advancing national governance modernization and reforming the territorial spatial planning system, collaborative governance has emerged as a crucial approach to resolve conflicts among multiple planning frameworks and enhance spatial governance efficiency. Grounded in collaborative governance theory, this study conducts an in-depth exploration of practical strategies for territorial spatial planning, aiming to provide theoretical references and practical guidance for achieving high-quality development and modernized governance in territorial spatial planning.

Keywords: collaborative governance; territorial spatial planning; spatial governance unit; multi-plan integration; implementation mechanism

Online publication: November 26, 2025

1. Introduction

China's territorial spatial planning reform has now entered a critical phase of advancing from integrated planning to systematic governance. However, practical implementation still faces challenges such as the separation of territorial spatial management from administrative jurisdiction, inefficient vertical transmission mechanisms, and inadequate interdepartmental coordination, which collectively constrain the overall efficiency of territorial spatial governance. The theory of collaborative governance emphasizes multi-stakeholder co-governance and systemic integration, providing crucial methodological support to address these issues. In this context, in-depth exploration of how to integrate collaborative governance with territorial spatial planning holds significant theoretical and practical value. It is essential to transform planning from a technical blueprint into a governance platform, thereby enhancing the systematicness, comprehensiveness, and operational feasibility of spatial governance.

2. The basic connotation and characteristics of collaborative governance

2.1. Theoretical origins of collaborative governance

As a modern governance concept, collaborative governance emerged and developed from the intersection and integration of synergy theory and governance theory. Synergy theory, proposed by German physicist Hermann Haken, points out that in complex systems of different natures, there exists a general law of mutual influence and collaboration among

subsystems. Through this inherent synergistic effect, the system can transition from a chaotic state to an ordered state, forming a new stable structure. This principle provides natural scientific analogies and insights for the interactive relationships among multiple entities in social systems. Meanwhile, governance theory, from the perspectives of political science and public administration, emphasizes that the management of public affairs is not a unilateral power or command of the government, but rather the sum of various ways in which public or private institutions and individuals jointly manage their intertwined affairs.

It is a continuous process of reconciling multiple or conflicting interests and promoting joint actions. The concept of collaborative governance, born from the combination of these two theories, lies in breaking through the traditional government-centered regulatory model. It advocates that under a common goal framework, multiple stakeholders such as the government, market entities, social organizations, and citizens can engage in equal dialogue, resource integration, and collective decision-making through formal or informal institutional arrangements, thereby more effectively addressing complex public challenges. Its entry into the China context adapts to the background of social structural changes and increasing complexity in public affairs, reflecting the trend of shifting from unidirectional management to multi-stakeholder co-governance and from command control to consultation and cooperation in governance models^[1].

2.2. Main characteristics of collaborative governance

Based on its theoretical connotation, collaborative governance manifests several interconnected key characteristics in practice. First is the diversity of governance actors, which explicitly recognizes and encourages the legitimate participation of market forces and social forces beyond government entities. This means resolving public affairs is no longer confined to administrative systems, but rather constructs a broad network of actors including government agencies, enterprises, community organizations, media, experts, and ordinary citizens. Each party contributes based on their resources, knowledge, and perspectives. Second is the interactivity of the governance process. Collaborative governance is not merely about opinion collection or result notification, but emphasizes establishing institutionalized mechanisms for communication, consultation, compromise, and consensus formation throughout policy-making, implementation, and evaluation. This interaction is continuous and bidirectional, aiming to consolidate fragmented or conflicting individual rationalities into collective rationality through thorough opinion exchange and interest coordination, ultimately forming widely recognized action plans. Finally, there is the networked governance structure. Continuous interactions among multiple stakeholders naturally form a flat, decentralized cooperative network rather than traditional hierarchical structures. In this network, authority stems more from knowledge, resources, and credibility, while actions rely on mutual trust and partnerships. Governance activities exhibit distinct multi-center, multi-node collaborative features. These characteristics collectively constitute the essential attributes that distinguish collaborative governance from traditional management models, providing a methodological foundation for its application in various complex public affairs domains.

3. The Intrinsic Connection between Collaborative Governance and Territorial Spatial Planning

The theory of collaborative governance provides a core paradigm for territorial spatial planning due to its inherent alignment in addressing complex systemic challenges. As a vast, integrated system encompassing natural ecosystems, socio-economic factors, and historical-cultural elements, territorial spatial planning inevitably involves multiple value objectives, overlapping spatial boundaries, and decentralized administrative entities. This complexity makes it impossible for any single department or administrative level to govern effectively alone. Instead, it requires cross-sectoral, cross-level, and cross-regional systemic collaboration. The principles of collaborative governance—multi-stakeholder participation, networked interactions, and consensus-driven decision-making—exactly align with the approach needed to tackle such systemic challenges. From a practical perspective, China's territorial spatial planning system reform is undergoing a profound transformation from the technical integration of “multi-plan convergence” to “systemic governance”. Long-

standing issues in traditional planning practices—including disconnects between jurisdictional management and territorial control, conflicting departmental objectives, and unclear implementation pathways—often stem from fragmented governance structures and inadequate coordination mechanisms. Therefore, introducing the concept of collaborative governance is not merely a superficial method transplantation, but a fundamental shift in planning mindset from technical blueprint drafting to modern public governance processes. This requires viewing planning as a continuous governance platform that integrates diverse values, balances multiple interests, and connects multi-level administrative responsibilities. By establishing institutionalized consultation, decision-making, and action frameworks, dispersed governance forces can be consolidated into a unified synergy to ensure the complete transmission of spatial strategic intentions and optimal allocation of spatial resources, ultimately achieving sustained enhancement of territorial spatial efficiency.

4. Theoretical framework of territorial space planning under the perspective of collaborative governance

4.1. The spatial governance unit system of “territorial domain + region” integration

The theoretical framework for establishing coordinated territorial governance primarily hinges on creating a spatial governance unit system that effectively integrates administrative responsibilities with natural geographical elements. This concept addresses the persistent disconnect between administrative jurisdiction (defined by administrative authority) and physical geographic areas (determined by natural resource distribution, ecological continuity, or socio-economic connections). Traditional planning practices often misalign these dimensions, resulting in regulatory gaps and policy overlaps. By aligning administrative jurisdictions with corresponding natural resource zones, ecological functions, or development areas, the system establishes unified governance cells with clear accountability. Typically structured in multi-tiered layers—including cross-regional coordination units, provincial/municipal/district/county units, and neighborhood/community units—each level corresponds to specific planning authorities and element control lists. At its core, this framework creates a governance platform that combines administrative feasibility with spatial coherence, enabling top-down policy directives and grassroots development needs to be integrated and balanced at the same spatial scale. This approach lays the foundation for comprehensive, system-wide governance across all domains and elements^[2].

4.2. Multi-objective collaborative planning indicators and threshold system

Territorial spatial planning bears multiple objectives including development protection, safety efficiency, fairness, and sustainability. These objectives often involve trade-offs, making it essential to establish a scientific multi-objective collaborative planning system. The core lies in creating a quantifiable, communicable, and coordinated indicator and threshold framework. This system must first transform macro strategic goals—such as ecological security, food security, economic vitality, and livability—into measurable planning indicators. These indicators should encompass not only traditional scale and structural metrics but also quality-based indicators reflecting spatial pattern efficiency, resource utilization intensity, and ecosystem service functions. Secondly, determining reasonable thresholds for key indicators forms the foundation of scientific governance. These thresholds should not be arbitrarily set but rather based on scientific analysis of resource-environmental carrying capacity and territorial spatial development suitability, identifying critical transition points in system states to define the baseline or ceiling for human activity scale. Finally, achieving multi-objective coordination requires system optimization models. By constructing spatial optimization models with multiple objective functions and constraints, various possible spatial patterns under different development scenarios can be simulated. This visually demonstrates the competitive and collaborative relationships between objectives, assisting decision-makers in making balanced choices among feasible options to optimize comprehensive benefits at the systemic level.

4.3. Governance mechanism of vertical transmission and horizontal coordination

To operationalize the theoretical framework, a governance mechanism combining rigid regulations with flexible

arrangements is essential for vertical transmission and horizontal coordination. The vertical transmission mechanism focuses on ensuring clear and effective communication of national and regional strategic visions to spatial governance units. The key lies in establishing a planning authority division system aligned with the “one-level government, one-level responsibility” principle, clearly defining the primary responsibilities and decision-making authorities of governments at all levels in ecological protection, permanent basic farmland conservation, and urban development. The transmission approach should not merely involve assigning indicators but require developing integrated tools combining “maps, lines, and data”. “Maps” refer to implementing spatial layout intentions through planning zoning diagrams of varying detail levels; “lines” denote rigid boundary management via ecological protection redlines and urban development boundaries; “data” involves controlling total volume and intensity through key indicators like construction land scale and forest coverage. The horizontal coordination mechanism aims to resolve issues of fragmented governance within government departments and overlapping jurisdictions. Within government agencies, regular cross-departmental consultation platforms should be established to integrate policies and resources from departments such as development and reform, natural resources, ecological environment, transportation, and agriculture and rural affairs around common spatial governance objectives. To achieve this, interregional collaboration requires establishing a binding mechanism for cross-border planning and benefit-sharing through equal consultation. This mechanism should address key issues such as infrastructure connectivity, joint ecological conservation, and coordinated industrial support among neighboring regions, thereby creating a unified governance framework^[3].

5. Practice strategies of territorial space planning under the perspective of collaborative governance

5.1. Building a multi-level spatial governance coordination system

To transform the concept of collaborative governance into concrete planning actions, it is essential to first establish a multi-level, cross-sector spatial governance framework. At the trans-regional level, the focus should be on breaking down administrative barriers and creating substantive collaborative platforms for regions with shared interests and ecological-geographical integrity. For instance, metropolitan areas or transboundary river basins should jointly develop binding regional action plans, emphasizing key aspects such as complementary urban functional positioning, shared construction of regional transportation corridors and municipal infrastructure, cross-border joint ecological conservation, and holistic protection and revitalization of cultural heritage. By jointly formulating specialized plans or action schemes, coupled with implementation mechanisms featuring coordinated planning, joint project consultations, shared costs, and benefit-sharing, strategic consensus can be translated into specific cooperative projects and spatial arrangements. At the process level, the key lies in embedding collaborative efforts throughout the entire lifecycle of planning—compilation, approval, implementation, and supervision. This helps establish regular vertical communication and horizontal consultation systems, allowing for early incorporation of perspectives from both higher and lower-level governments and peer departments during the planning phase, with consensus achieved through multiple rounds of negotiations. During the approval stage, reaching consensus on opinions from neighboring regions should serve as a prerequisite. In the implementation phase, regular joint meetings and information-sharing platforms should be utilized to track progress on collaborative matters. At the multi-stakeholder level, the core strategy involves institutionalizing participation channels. The government should serve as the central organizer and coordinator by establishing expert advisory committees, planning public forums, and hosting corporate symposiums. These measures provide stable and effective platforms for market forces and the public to participate, ensuring that all stakeholders’ concerns are reasonably reflected and integrated into planning schemes. This approach fosters a collaborative governance framework characterized by government leadership, social consultation, and public engagement^[4].

5.2. Policy tools and pathways for innovative planning implementation

To ensure the blueprint for collaborative governance can be effectively implemented, it is essential to move beyond traditional single-command control mechanisms and innovate policy toolkits for planning execution. Policy innovation should focus on providing incentives and guidance rather than merely imposing constraints. A key direction involves exploring differentiated policy supply based on spatial governance units. For instance, units prioritizing ecological conservation should be supported by positive incentive policies such as ecological compensation and green development funds. For urban units emphasizing existing stock renewal, comprehensive urban renewal policy packages should be designed, including floor area ratio incentives, property rights integration, and revenue distribution mechanisms, to balance stakeholder interests and stimulate market and social capital participation. Another critical approach is to deepen market-oriented innovations in land development rights management. This includes improving cross-regional land use indicator trading mechanisms, allowing market-based optimization of construction land layouts while ensuring dynamic balance of arable land totals and preservation of ecological functions. Resources should flow to areas with higher utilization efficiency. Drawing on policy experiences like “land balance linkage” and “existing stock revitalization,” these mechanisms can be upgraded into systematic tools supporting comprehensive territorial space remediation. Surplus construction land indicators and planning floor area ratios should be strategically allocated to prioritize key projects for regional coordinated development. By integrating spatial restructuring intentions with local development drivers, we can achieve synergistic protection and development outcomes.

5.3. Strengthening the supervision and evaluation mechanism for planning implementation

A robust supervision and evaluation system serves as the cornerstone for ensuring collaborative management effectiveness and achieving flexible planning adjustments. This system should be implemented throughout the entire process, from strategic planning to operational execution. It requires establishing a hierarchical supervision framework that aligns with multi-level spatial management collaboration systems. National and provincial authorities should focus on monitoring cross-regional cooperation strategies, key constraint indicators, and the implementation of critical control lines. Local governments at city and county levels should prioritize tracking progress in regional spatial management objectives, public service allocation, and spatial quality improvement. Digital tools should be fully utilized to support supervision and evaluation. The “One Map” implementation supervision information system for territorial spatial planning should aggregate multi-source data to create a digital platform capable of real-time monitoring of regional development coordination, resource utilization efficiency, ecological system performance, and basic service capacity. By setting early warning thresholds, potential deviations or risks in plan implementation can be swiftly identified and alerted. Supervision conclusions must be closely linked to policy revisions, performance evaluations, and accountability incentives. Regular planning implementation reports should serve as primary references for optimizing subsequent planning cycles and refining strategies. Additionally, collaborative management achievements—particularly cross-regional and interdepartmental collaboration outcomes—should be incorporated into government performance evaluation systems. This establishes a virtuous cycle of monitoring, evaluation, feedback, and continuous improvement, ensuring steady progress in territorial spatial planning through collaborative management and ultimately achieving modernization of spatial management capabilities^[5].

6. Conclusion

In summary, collaborative governance has established a core framework for transitioning territorial spatial planning from technical blueprints to comprehensive governance. By constructing a spatial governance unit system that integrates “administrative jurisdictions + geographic regions”, refining multi-objective coordinated planning indicators and transmission mechanisms, and innovating multi-level, multi-stakeholder implementation pathways and policy instruments, we can effectively address institutional and operational challenges in planning implementation. Moving forward, it is

essential to deepen institutional, instrumental, and mechanistic innovations, strengthen end-to-end supervision and dynamic evaluation, and foster a virtuous cycle of multi-stakeholder governance involving government, market, and society. This approach will comprehensively enhance the systematicness, integrity, and sustainability of territorial spatial governance, ultimately achieving the fundamental goal of high-quality development and modernization of governance capabilities in territorial spatial planning.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Wang RG, Fu YY, Pang QK, 2025, Research on Multi-dimensional Reconstruction of Residential Area Planning and Design Curriculum under the Guidance of Territorial Space Planning: An Innovative Teaching Paradigm Based on the “Knowledge-Technology-Governance” Synergy. *Architecture and Culture*, (6): 294-297.
- [2] Wang W, Liu H, 2025, Research on the Synergistic Mechanism between Ecological Environment Zoning Control and Territorial Space Planning under the Guidance of Ecological Product Value Realization. *Environmental Protection*, 53(11): 13-18.
- [3] Li D, Li MC, Li WF, et al., 2025, Research on the Synergistic Path of Ecological Protection Red Line and Territorial Space Planning under the Concept of Full-cycle Management. *Environmental Protection*, 53(11): 19-24.
- [4] Zeng SP, Wang QQ, Tian J, 2025, Theoretical, technical system and practical approaches of territorial spatial planning based on synergistic pollution reduction and carbon emission reduction. *Journal of Western Human Settlements*, 40(4): 16-22.
- [5] Wang N, Zhu P, Hu T, et al., 2025, Theoretical framework and practical approaches for implementing evaluation of territorial spatial planning oriented toward high-quality development. *Planner*, 41(3): 9-16.

Publisher's note

Whioce Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.