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Sustainable Socio-Economic Regional Development: A Territorial Analysis of the Republic of Buryatia (Russia)

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Abstract: This study analyzes sustainable socio-economic development using the Republic of Buryatia as a case study, focusing on the organization of municipal entities based on their territorial and spatial characteristics. The territorial structure of Buryatia includes areas with varying legal statuses, determined by Russian Federation legislation including laws on state borders, specially protected natural areas, Lake Baikal protection, and the Government Resolution No. 1946 (2021) designating Far North and equivalent territories. This legal diversity necessitates a detailed analysis of each territorial category, as these specific characteristics critically shape the conditions for sustainable socio-economic development. The legal definition of territorial status imposes various prohibitions and limitations not only on enterprise activities but also on the living conditions of local populations. Restrictions on certain types of economic activity contribute to social tensions, including unemployment, limited job creation, shrinking local budgets, and reduced off-budget investment. Therefore, regional spatial strategies and models of sustainable socio-economic development must account for these territorial distinctions. The diverse territorial features necessitate detailed analysis to inform regional spatial strategies and sustainable socio-economic development models. This approach facilitates stable, rational planning for sustainable regional development.

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1 INTRODUCTION

Economic development, a cornerstone of economic theory, encompasses diverse vectors of societal and human activity evolution, integrating economic, social, and environmental dimensions (Sukharev, 2005; Schumpeter, 2007). Contemporary scholars predominantly define it as a process of sustained economic growth, characterized by increases in per capita income, productivity, and structural transformation (Dermanov, 2013; Babina 2021). However, this definition has evolved to incorporate sustainability, emphasizing the balance between economic progress, environmental preservation, and social equity (Mao, Zhang, Lu, & Guo, 2024). In the context of regional studies, economic development is increasingly analyzed through the lens of territorial and spatial characteristics, which shape the unique socio-economic trajectories of subnational entities (Gusman & Sandry, 2022).

The Republic of Buryatia, located in the Russian Federation, serves as a compelling case study for examining sustainable socio-economic development due to its diverse territorial classifications and complex regulatory frameworks. The region's territories are governed by distinct legal statuses, including Far North and equivalent areas, border regions, specially protected natural areas under Lake Baikal's protection, and traditional territories. These classifications, defined by federal legislation such as Resolution No. 1946 (2021) and laws on state borders and environmental protection, impose varying restrictions on economic activities and local livelihoods, influencing sustainable development outcomes (Russian Laws No. 4730-1, 33-FZ & 94-FZ). For instance, restrictions in Lake Baikal's protected areas limit industrial activities but foster tourism potential, while border regions face constraints that necessitate cross-border integration strategies.

2 RESEARCH OBJECTS AND METHODS

This study examines the system of territorial organization in the Republic of Buryatia, with particular attention to its complex spatial structure. The research employs methods of comparative analysis, generalization, and territorial typology. It also analyzes the legal and regulatory framework governing the territorial status of the Republic of Buryatia, along with prospective directions for its economic development.

3 RESULTS AND DISCUSSION

Sustainable development reflects a system's progressive shift from lower to higher states. This shift is driven by self-improvement and adaptation to external conditions. In contrast, regressive dynamics are a reflection of decline. Economic processes shape distinct sustainability vectors (Minakir, 2013), characterized by nonlinear transitions across social, political, and economic phases that affect business activity and regional socio-economic stability. Socio-economic sustainable development is a dynamic process in which economic activity drives positive, sustainable transformations of a region, following either extensive or intensive trajectories (Gurieva, 2016; Chulkova & Trofimova, 2023).

Intensive regional development is characterized by indicators such as current asset turnover, capital productivity, labor intensity, energy intensity, workforce qualifications, and labor productivity. These indicators qualitatively assess the efficiency and structure of a region's economic processes. Positive trends in these indicators reflect progressive dynamics, thereby signaling an increase in the region's level of sustainable development. In contrast, extensive regional development is typically measured by indicators such as the volume of financial resources, labor force size, and related metrics. Each qualitative indicator of sustainable regional development broadly reflects the intensity of resource utilization. Accordingly, resources engaged in economic processes are shaped by extensive or intensive factors. These factors form vectors influencing the system's sustainable development.

The concept of sustainable development was officially introduced at the 1992 United Nations Conference on Environment and Development (UN, 2022), which outlined the global consensus on environmental issues at the time, with particular emphasis on ecological sustainability (Sharaldaev, Sharaldaeva, Slepneva, Bulatova, 2024; Swedish Government, 2003). Sustainable regional development aims to ensure the stable advancement of a region's socio-economic conditions while achieving development objectives without depleting regional potential or compromising environmental security. It should be pursued through the systematic and rational utilization of spatial development potential, thereby supporting the region's solvency, creditworthiness, and the viability of its economic entities. In addition, sustainable development should enhance the stability of socio-economic processes and promote the employment of locally skilled labor. It must also strengthen territorial competitiveness and contribute to improving the population's quality of life.

Sustainable regional development can be conceptualized as a system of composite indicators. This comprehensive framework enables the analysis of socio-economic development by incorporating financial, environmental, technological, and social dimensions. By identifying key domains of regional socio-economic activity, it becomes evident that sustainable development comprises seven principal components: organizational, production, technical, technological, financial, social, and environmental (see Figure 1).

Figure 1: Elements of economic sustainability of a region (Swedish Government, 2003).

For example, as shown in Figure 1, financial sustainability is one of the key dimensions of economic sustainability. It reflects a region's financial position and the availability of financial resources, which are critical for the effective implementation of federal, regional, and municipal programs and projects. This, in turn, ensures the stable and efficient fulfillment of a region's socio-economic obligations. In this context, financial sustainability is also evidenced by consistent budget execution or the presence of a regional budget surplus. Accordingly, economic sustainability should be regarded as an essential economic category that underpins the functioning of the regional socio-economic system. It is manifested through a range of economic and financial composite indicators that serve as key benchmarks for sustainable development. These indicators, shaped by both internal and external factors, can exert a significant influence on the region's capacity for sustainable development.

In regional operations, external factors pertain to the broader environment in which a region conducts its socio-economic activities. In contrast, internal factors are defined by the region's inherent production capabilities and functional capacities. The interplay of external and internal factors is a critical criterion for assessing regional performance and determining the level of sustainable development. Empirical evidence and academic research demonstrate that regions differ markedly in geographic location, natural and climatic conditions, proximity to economic centers, infrastructure development, population density, and other characteristics. Consequently, the effects of these factors on the local population's socio-economic and institutional functioning vary in both magnitude and nature. Even a single factor can substantially influence economic actors' behavior and a region's overall quality of life.

In a developed economy, internal regional factors often serve as the primary drivers of sustainable development. Within the Russian Federation's vast territorial expanse, regions exhibit significant social and economic variation due to situational and systemic influences. Moreover, municipalities within the same region frequently display pronounced differences in these characteristics. As a result, regional and local authorities must implement differentiated socio-economic policies tailored to their specific contexts. To investigate sustainable socio-economic development at the regional level, this study focuses on the Republic of Buryatia (Russia). The republic comprises several distinct administrative and functional zones, each with its own status and developmental characteristics.

1. According to Resolution No. 1946 of the Russian Federation Government dated 16 November 2021, "On the Approval of the List of the Far North and Territories Equivalent to the Far North", the following municipal entities in the Republic of Buryatia are classified as Far North or equivalent territories: Bauntovsky Evenkiysky, Barguzinsky, Okinsky, Kurumkansky, Muysky, Severobaikalsky districts, and the city of Severobaikalsk. These northern territories encompass an area of 203.2 km^2, representing 57.84% of Buryatia's total land area. The population in these territories totals 80,400, accounting for 8.37% of the republic's population, with a population density of 0.39 persons per km^2 (Russian Government, 2021). Characterized by harsh climatic conditions and underdeveloped infrastructure, these regions possess significant natural resource potential.

2. According to federal legislation, Tunkinsky, Kyakhtinsky, Dzhidinsky, Okinsky, and Zakamensky districts are classified as border regions. These areas collectively cover 66.4 km^2, accounting for 18.9% of the republic's total territory. The population of these border districts totals 126,400, representing 13.16% of Buryatia's

population, with a population density of 1.9 persons per km^2. Federal regulations significantly constrain economic activities in these areas, while their proximity to Mongolia offers substantial potential for cross-border integration (Russian Government, 1993).

3. Municipal districts designated as specially protected natural areas under Lake Baikal's legal protection framework face stringent regulations that constrain economic activities and local livelihoods. Covering 101.7 km^2 (28.94% of Buryatia's total area), these districts have a population of 124,290 (12.94% of the republic's population) and a density of 1.68 persons per km^2. Situated along Lake Baikal's coastline, these areas are subject to federal legislation limiting economic development. Despite these restrictions, they offer significant potential for tourism and recreational business, provided all activities prioritize ecological preservation and sustainability (Russian Government, 1995; Russian Government, 1999).

4. Traditional territories, those not classified under previously discussed categories, span 118.73 km^2 (33.79% of Buryatia's total area) and have a population of 267,160 (65.79% of the republic's population), with a density of 7.24 persons per km^2 (Sharaldaev, Sharaldaeva, Slepneva, Bulatova, 2024; Sharaldaev 2013). Economic entities in these areas may engage in diverse activities, subject to Russian Federation legislation. These territories exhibit distinct economic structures, social conditions, and sustainable development indicators. Effective territorial-economic management requires each zone to contribute proportionately to achieving sustainable socio-economic development benchmarks and optimizing regional economic potential.

Key indicators of regional sustainable development include:

- the proportion of territory utilized for economic activity;
- the socio-economic efficiency yield, measured as Gross Regional Product per square kilometer.

The proposed methodology incorporates geo-economic characteristics, active entrepreneurship, and population engagement in investment and social activities. The regional economy's structure results from systemic and situational factors, which shape the allocation of productive forces to ensure sustainable development. Economic process stability depends on mitigating external threats and risks while balancing stakeholder interests. Sustainable municipal economic development arises from leveraging territorial resources to align the strategic interests of society, population, and businesses, prioritizing long-term quality of life.

Conflicts between individual economic agents' objectives and regional economic system goals necessitate an integrated framework of tasks, iteratively developed to align stakeholder interests, promoting socio-economic sustainable development while allowing for continuous refinement. Information resources significantly influence sustainable economic development, impacting social, economic, political, and institutional domains of enterprises and society. The informational potential, shaped by accurate and relevant data on external and internal environments (including risks), is critical for decision-making in regional sustainability.

External and internal environmental factors substantially affect regional socio-economic sustainable development. Effective development requires mechanisms and instruments, grounded in market economy principles, to guide dynamics. Achieving sustainability demands optimal, systematic utilization of regional potential, tailored to municipal territorial characteristics.

4 CONCLUSIONS

This study has examined the interaction of territorial classifications, regulatory frameworks, and socio-economic indicators in shaping sustainable development strategies for the Republic of Buryatia. It recommends that sustainable regional economic development be guided by an integrated framework that balances social, economic, and environmental dimensions, utilizing composite indicators commonly employed in economic research.

The sustainable use of regional resources, supported by accurate data on both internal and external conditions, is essential for informed decision-making and for strengthening regional resilience. A key element in formulating a sustainable development strategy is the consideration of territorial specificities, including regulatory constraints and the sectoral characteristics of each territorial entity.

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