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MECHANISMS FOR MANAGING THE DEVELOPMENT OF RURAL AND FOREST TERRITORIES OF COMMUNITIES

Abstract. *The article examines the mechanisms for managing the development of rural and forest areas of territorial communities in the context of decentralization, military and political instability, and worsening environmental challenges. It is argued that rural and forest areas perform complex productive, environmental, social, and recreational functions, while remaining centers of infrastructural neglect, demographic depletion, conflictual land use, and fragmented management decisions. The purpose of the article is to systematically theorize and methodologically analyze mechanisms for managing the development of rural and forest areas within communities in the context of decentralization and increased environmental risks. The theoretical basis of the study is the concepts of sustainable and integrated territorial development, the "green" economy, institutional and landscape approaches, which allow rural and forest areas to be interpreted as a subsystem of the general territorial system of the community with its own configuration of goals, resources, interests, and management entities. The essential characteristics of rural and forest areas as spaces for the implementation of ecosystem services and local development are summarized, and the role of formal (legislation, plans, programs) and informal (land use traditions, regional practices, community values) institutions in shaping the framework for acceptable behavior of actors is outlined. Institutional, regulatory, financial, economic, organizational, spatial planning, environmental, digital, and participatory management mechanisms are systematized, and their multifunctional, integrated, and adaptive nature is demonstrated. The importance of program-targeted budgeting, economic incentives for sustainable natural resource use, cluster development, landscape planning, the introduction of geographic information systems, open data, and hybrid formats of citizen participation is emphasized. It is concluded that effective mechanisms for*

managing the development of rural and forest areas must meet the requirements of comprehensiveness, intersectoral coordination, and co-management, and that further research should focus on developing models to assess their effectiveness and on tools for green financing and payment for ecosystem services.
Keywords: *mechanisms, risks, territorial communities, rural areas, forest areas, competitiveness, population, socio-economic development, decentralization, development, risk management, management system, forestry enterprises, strategic management.*

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МЕХАНІЗМИ УПРАВЛІННЯ РОЗВИТКОМ СІЛЬСЬКИХ І ЛІСОВИХ ТЕРИТОРІЙ ГРОМАД

Анотація. *У статті досліджено механізми управління розвитком сільських і лісових територій територіальних громад в умовах децентралізації, воєнно-політичної нестабільності та загострення екологічних викликів. Обґрунтовано, що сільсько-лісові території виконують комплексну виробничу, екологічну, соціальну та рекреаційну функції, водночас залишаючись осередками інфраструктурної занедбаності, демографічного виснаження, конфліктного землекористування та фрагментованих управлінських рішень. Метою статті є теоретико-методологічна систематизація механізмів управління розвитком сільських і лісових територій громад в умовах децентралізації та посилення екологічних ризиків. Теоретичною основою дослідження виступають концепції сталого та інтегрованого територіального розвитку, «зеленої» економіки, інституціональний і ландшафтний підходи, що дозволяють трактувати сільсько-лісові території як підсистему загальної територіальної системи громади з власною конфігурацією цілей, ресурсів, інтересів та суб'єктів управління. Узагальнено сутнісні характеристики сільських і лісових*

територій як простору реалізації екосистемних послуг та локального розвитку, окреслено роль формальних (законодавство, плани, програми) та неформальних (традиції землекористування, локальні практики, цінності громади) інститутів у формуванні рамок прийнятної поведінки суб'єктів. Систематизовано інституційно-нормативні, фінансово-економічні, організаційні, просторово-планувальні, екологічні, цифрові та партисипативні механізми управління, показано їх мультифункціональний, інтегрований і адаптивний характер. Наголошено на важливості програмно-цільового бюджетування, економічних стимулів до сталого природокористування, розвитку кластерів, застосування ландшафтного планування, запровадження геоінформаційних систем, відкритих даних і гібридних форматів участі громадян. Зроблено висновок, що ефективні механізми управління розвитком сільських і лісових територій мають відповідати вимогам комплексності, міжсекторальної координації та співуправління, а подальші дослідження доцільно спрямувати на розроблення моделей оцінювання їх результативності та інструментів «зеленої» фінансалізації й оплати за екосистемні послуги..

Ключові слова: *механізми, ризики, територіальні громади, сільські території, лісові території, конкурентоспроможність, населення, соціально-економічний розвиток, децентралізація, розвиток, управління ризиками, система управління, підприємств ЛПК, стратегічне управління.*

Introduction. The development of rural and forest territories of territorial communities in the context of decentralization, military-political instability, and increased environmental challenges has become a systemic public and administrative problem that goes far beyond purely spatial or sectoral policy. Rural and forest territories combine industrial, ecological, social, and recreational functions, forming the basis for the reproduction of natural resources, food security, local employment, and conservation of biodiversity and cultural landscapes. At the same time, these territories are traditionally characterized by infrastructural abandonment, demographic exhaustion, low investment attractiveness, land-use conflicts, and often fragmented decision-making. Under such conditions, there is an objective need to develop and implement effective mechanisms for managing the development of rural and forest areas of communities, which would combine economic feasibility, social justice, and environmental sustainability.

Mechanisms for managing the development of rural and forest areas are complex, multi-level, and include institutional, regulatory, financial-economic, spatial-planning, organizational, environmental, information-digital, and participatory tools. Their effectiveness is determined, on the one hand, by the quality of state, regional, and sectoral policy, its consistency with European standards of territorial governance, and, on the other hand, by the institutional, analytical, and financial

capacity of the communities themselves to develop and implement their own development strategies. An essential feature of the current stage is the transition from the sectoral resource logic of the use of rural and forest areas to the concept of integrated territorial development based on the principles of sustainability, multifunctionality, intersectoral coordination, and stakeholder involvement.

Analysis of recent studies and publications. The issues of the development of territorial communities, in particular the analysis of the potential of rural and forest territories, were studied by some domestic scientists, including: A. Antonov [1], E. Boyko [2], O. Gyultekin [3], A. Deineka [4], I. Dubovich [5], I. Kalutskyi [6], G. Levkiv [7], P. Markiv [8], M. Plotnikova [9], Z. Smutchak [10], M. Stegney [11], V. Yakobchuk [12], and others. However, today, the mechanisms for managing the development of rural and forest territories within communities remain unfully disclosed.

The purpose of the article is to systematize mechanisms for managing the development of rural and forest areas within territorial communities in the context of decentralization, rising environmental risks, and the growing role of the local level in shaping sustainable spatial development policy.

Summary of the primary material of the study. In modern scientific discourse, rural areas are considered spaces outside large urban agglomerations, characterized by the dominance of agricultural production, low population density, and a specific way of life closely related to the use of natural resources. Forest areas, in turn, are interpreted not only as areas covered with forest vegetation but also as spaces for the provision of a wide range of ecosystem services – microclimate regulation, maintenance of the water regime, protection of soils from erosion, provision of recreational opportunities, and preservation of biodiversity and cultural heritage [13]. Within territorial communities, these types of territories are mostly spatially integrated, forming a complex structure of rural and forest landscapes in which the interests of agriculture, forestry, environmental safety, recreation, and local development intersect.

The theoretical basis for managing the development of such territories is formed by the concepts of sustainable development, integrated territorial development, green economy, and landscape approach. Sustainable development involves balancing economic, social, and environmental goals, which, in rural and forest areas, means simultaneously supporting competitive and environmentally responsible agriculture and forestry, preserving natural resources and ecosystem services, and ensuring an adequate quality of life for the population [14]. Integrated territorial development focuses on coordinating policies across sectors (agriculture, forestry, environment, transport, spatial planning, and protection of cultural heritage) within a specific community as an integral socio-territorial system.

From a methodological standpoint, the management of rural and forest areas requires a systematic approach: these territories should be considered a subsystem of the community's general territorial system, with its own goals, resources, balance of interests, subjects, and management tools. It is crucial to combine systematic and participatory approaches when residents, farmers, representatives of timber enterprises, environmental organizations, tourism businesses, and public initiatives are involved in strategic planning, prioritization, program development, and resource use control. From the standpoint of institutional economics, the management of rural and forest territories can be interpreted as an interaction of formal institutions (laws, bylaws, plans, programs, procedures) and informal norms (land use traditions, local farming practices, value orientations of the community), which jointly determine the framework of acceptable behavior of subjects.

Functionally, the mechanisms for managing the development of rural and forest areas are designed to ensure the rational use of land and forest resources, prevent landscape degradation, increase the added value of local products, diversify the economic base of the community through the development of non-agricultural activities (green tourism, recreational services, craft production, processing of local raw materials), as well as reduce vulnerability to climate change and natural risks (floods, landslides, forest fires) [9-10]. This means that management mechanisms cannot be narrowly sectoral – they must be multifunctional, integrated, and adaptive

to the spatial, natural resource, and socio-economic characteristics of a particular community.

The institutional dimension of rural and forest development management is determined by the architecture of public power and the distribution of powers between central executive bodies, regional structures, and territorial communities. The decentralization reform has significantly expanded the competencies of communities in the field of spatial planning, land management outside settlements, formation of development strategies, and attracting investments, but at the same time exposed several systemic gaps – insufficient consistency of sectoral legislation, conflicts of interest in land use, and a deficit of managerial and analytical competencies at the local level.

The regulatory framework for the management of rural and forest territories is formed by land, forestry, environmental, water, spatial planning, local self-government, nature reserve fund, and cultural heritage protection legislation. Formally, communities received the right to dispose of a significant part of agricultural land and specific forest fund resources. Still, in practice, management capabilities are often constrained by long-term lease agreements, vertically organized approval procedures, and insufficiently complete and high-quality information on resources. Institutional asymmetry is also evident in the fact that the subjects of forest resource management within the community are local councils, state forestry enterprises, central executive authorities, and environmental structures, each with different priorities regarding the balance between economic exploitation and the preservation of ecosystem functions.

Under such conditions, mechanisms for coordination and coordination of positions are of key importance – advisory councils at local self-government bodies, interdepartmental working groups, cluster associations, and partner platforms - which allow coordinating the actions of different stakeholders regarding the use of rural and forest areas [11]. At the community level, an essential institutional prerequisite is the availability and mutual consistency of strategic documents – community development strategy, comprehensive spatial development plan, environmental protection

programs, agricultural sector and forestry development programs, and emergency risk management plans. In the absence of such coherence, the risk of fragmented solutions increases the likelihood of point development, excessive deforestation, soil degradation, and conflicts between investors and residents.

The financial and economic dimension of mechanisms for managing the development of rural and forest areas is associated with the formation of a sustainable revenue base for local budgets, capable of financing long-term investments in infrastructure, environmental measures, and human capital development. Tax revenues from agricultural production, the processing industry, forest management, recreational and tourist services form an essential part of community resources. Still, their volume and structure often do not allow for the implementation of a full-fledged sustainable development policy, and existing fiscal regimes do not always create sufficient incentives for the introduction of environmentally oriented practices.

One of the basic financial mechanisms is the program-targeted approach to budgeting, in which expenditures for the development of rural and forest areas are recorded through special programs with clearly defined goals, objectives, performance indicators, and identified funding sources [6]. This makes it possible to increase transparency in resource allocation, assess the effectiveness of investments in reforestation, fire prevention measures, reclamation of degraded areas, development of rural and ecological tourism, and support for cooperatives and clusters. Additional financial opportunities are opened by state and regional support funds, international technical assistance projects, public-private partnership mechanisms, and targeted environmental and resource payments.

Economic incentives for sustainable environmental management occupy a vital place: preferential tax regimes for timber enterprises that implement energy-saving technologies, organic farming, or certified forest management; local compensation programs for afforestation of degraded areas; support for farms that practice agroforestry; and the introduction of mechanisms for payment for ecosystem services. In the field of forestry, a promising model is one in which users of ecosystem services (water users, tourism businesses, and industrial consumers) partially

compensate the community for losses incurred from limiting intensive forest exploitation.

Organizational mechanisms for managing the development of rural and forest areas include the creation of specialized units or positions within local self-government bodies responsible for spatial development, land and forest resources, environmental policy, and project management. In communities with a significant share of the forest fund, it is advisable to form communal forestry enterprises or joint structures with state forestries, thereby providing a closer link between the economic, environmental, and social goals of forest management [1]. Local development agencies play an essential role, acting as centres of competence in preparing and supporting investment projects, attracting grant funding, and promoting the territory's brand as a rural and forest region with unique natural and cultural characteristics.

An essential element of modern mechanisms is the support of cooperation between business entities in rural and forest areas. The creation of agrarian forestry, tourism, and processing clusters enables the combination of small and medium-sized enterprise resources, increases their market power, establishes common product quality standards, and develops short supply chains and local markets. Local self-government bodies can initiate such associations, provide them with the necessary infrastructure (roads, logistics, digital infrastructure), and promote access to national and international markets, including the demand for environmentally certified products.

The spatial-planning component of mechanisms for managing the development of rural and forest areas is key to long-term balance in resource use and the prevention of land-use conflicts. General plans for settlements, comprehensive spatial development plans for communities, land management, and forest management schemes should be mutually agreed upon, based on the actual landscape structure, natural constraints, ecological corridors, and risk zones from natural hazards. In the absence of such integration, communities risk making situational decisions that, in the future, lead to chaotic development, excessive deforestation, soil erosion, flooding, and other negative consequences.

Sustainable development of forest areas involves the transition from a monofunctional model "forest as a source of wood" to a multifunctional one, which considers the protective, recreational, cultural, and biodiversity functions of forests [2]. For the community, this means that the economic benefits of logging should be correlated with the environmental and social benefits of preserving forest ecosystems, developing nature-oriented tourism, and protecting against dangerous hydrometeorological phenomena. Essential spatial tools include the designation of protected areas, the formation of local ecological networks, the establishment of slope-plowing restrictions, the development of coastal protection zones, and the extraction of minerals in sensitive landscapes.

In rural areas, the key spatial solutions are to prevent excessive land fragmentation, preserve soil cover, and maintain an optimal balance between arable land, meadows, pastures, forest belts, and natural biotopes. The introduction of landscape planning principles allows us to consider the community territory as a single ecosystem in which agricultural activity is consistent with the water regime, relief, migratory corridors of fauna, and natural restoration processes. In this context, the development of agroforestry is promising when forest belts, groves, and coastal plantations are integrated into the agricultural landscape, increasing its resistance to climate change, wind, and water erosion.

Ecological mechanisms for managing rural and forest areas are based on systems for monitoring environmental conditions, assessing the impacts of economic activity, and developing and implementing environmental protection programs [3]. Regular collection of data on the state of forests (structure of plantations, degree of damage by pests and diseases, anthropogenic load), soil quality, water balance, spread of invasive species allows making scientifically grounded decisions on limiting felling, correcting the structure of crops, reclamation of disturbed areas, restoration of natural meadows and wetlands.

In modern conditions, digital governance mechanisms are becoming an essential component that enhances transparency, decision validity, and citizen involvement. Geographic information systems allow you to visualize land-use

structures, forest conditions, risk zones, protected-area boundaries, and conflict areas, which significantly facilitate planning and decision communication. Open cadastral maps and electronic services for access to information on lease agreements, forest use, and environmental restrictions; strengthen trust in local authorities; reduce the risk of corruption; and facilitate investment activities. Digital platforms enable the implementation of elements of a "smart village" – environmental monitoring systems, early fire warning, and resource-use optimization in agriculture.

Participatory mechanisms – public hearings, residents' participation in the preparation of strategic and spatial documents, participatory budgets, stakeholder working groups – are critical to the legitimacy of decisions on rural and forest areas. Ignoring local knowledge, values, and community expectations often leads to conflicts, protests, and the blocking of projects, especially those related to deforestation, land repurposing, or restrictions on access to natural resources. Hybrid participation formats that combine face-to-face and online tools (e-consultations, interactive maps of problem areas, online priority surveys) allow you to involve a broader range of residents and improve the quality and inclusiveness of management decisions.

Conclusions. Management of the development of rural and forest territories of territorial communities is a multidimensional, complex public management system, within which institutional, regulatory, financial, economic, spatial planning, environmental, digital, and participatory mechanisms interact. The theoretical and methodological basis of these mechanisms is the concepts of sustainable and integrated territorial development, institutional approach, and landscape planning, which allow us to consider rural and forest areas as a strategic resource of communities, on which food security, climate resilience, quality of life of the population, and the economic base of local development depend.

Institutional and normative foundations, despite the expansion of communities' powers within the framework of decentralization, remain fragmented and exhibit institutional asymmetry across different levels of government and natural resource management entities, necessitating the strengthening of coordination mechanisms and

harmonization of land, forest, environmental, and spatial planning legislation. Financial, economic, and organizational mechanisms should be aimed at supporting the multifunctional use of rural and forest areas, creating a system of monetary incentives for the preservation of forests and soils, the restoration of degraded landscapes, and the development of cooperation between economic entities.

Spatial planning and environmental mechanisms should be based on integrated community development plans, considering natural constraints, ecological corridors, emergency risks, the need for biodiversity conservation and ecosystem services, as well as on the introduction of a landscape approach and agroforestry as fundamental tools for increasing the resilience of territories to climatic and anthropogenic challenges. Digital and participatory mechanisms significantly enhance the transparency, validity, and social acceptability of decisions and contribute to the transition to co-management models, in which the community is not a passive object but an active subject in the formation and implementation of policy on the use of natural resources.

Summing up, effective mechanisms for managing the development of rural and forest areas within communities should be comprehensive, integrated, adaptive, and sensitive to territorial specifics, combine different tools and levels of governance, and ensure broad stakeholder involvement. Promising areas of further research are the development of quantitative and qualitative models for assessing the effectiveness of these mechanisms, a comparative analysis of management practices in different types of communities, as well as deepening the study of green financing tools and payment for ecosystem services as new sources of sustainable development of rural and forest areas.

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