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M. Mandić¹,
D. Delić²

Development problems and differentiation of rural areas of the Republic of Srpska

^{1,2}The Faculty of Natural Sciences and Mathematics, University of Banja Luka, The Republic of Srpska, Bosnia and Herzegovina
e-mail: mira.mandic@pmf.unibl.org¹, dragica.delic@pmf.unibl.org²

Abstract. *An integrated approach to the valorization of rural areas, with the aim of sustainable development, changes the perception of rural areas and establishes a multifunctional concept of development. The focus of the work is the rural area of the Republic of Srpska (RS), an entity in Bosnia and Herzegovina (B&H). By analyzing socio-geographical indicators of spatial development, the RS was differentiated according to the degree of development. The development possibilities and limitations of the selected problem areas that are in constant expansion are considered. The paper has an analytical character and the possibility of application in development policies for the revitalization of rural areas.*

Keywords: *rural areas, rural development, the Republic of Srpska, problem areas.*

Introduction

Rural areas cover about 90% of the Earth's surface. They possess the natural resources on which the economy development and the world's population survival are based. The development of rural areas was unfolding spontaneously. The integration of rural space into modern development processes is partial and conditioned by numerous factors: spatial dispersion of natural resources, proximity and functional capacity of urban centers, quality of infrastructure and development policies (national and local). The mismatch between demographic and economic growth causes poverty and developmental lagging. Valorization of rural areas only for agricultural purposes, slows down infrastructural investment and overall development and results in negative demographic processes. Deruralization is manifested in economic passivity, “atrophy” of space and rural areas lagging behind the average national development. This process characterizes less developed countries, but also certain regions in developed countries.

In terms of pronounced urban-rural polarization, after several tried and tested models of development in various regions of the world (communal development programs, green revolution, etc.), the practice of developed countries, especially the European Union (EU), saw the need to establish the concept of sustainable integral rural area development. Development policies are changing and targeting rural areas for the first time, mobilizing overall local resources and state support [1]. Various initiatives aimed at improving living conditions in rural areas emphasize the complex valorization of space, rational management of natural resources, economic and social development, preservation of cultural heritage and environment. Thus, the concept emphasizes “the integration of development and protective goals in the function of long-term sustainable development” [2, p. 61] because the development of the rural economy is based on a preserved environment. Development disparities within the same countries and regions point to the need to establish territorial cohesion and an integrated approach to development policies that also include rural areas. Approaches to development, in order to valorize geospatial potentials and establish all aspects of the concept of sustainability,

are defined in several strategic documents and development programs: European Commission COM 88, Maastricht Agreement 1993, Agenda 2000, RURAL 21 in Potsdam 2000, Council of Rural Area (2000), INTERREG and ESPON 2002, LEADER 1991–2006, Territorial Agenda and the State and Perspectives of the EU Space 2007 and 2011.

Several development funds have been established for their implementation. With the Territorial Agenda, the umbrella document for the spatial development of EU countries, the economic aspect of rural development has acquired a polyfunctional character. The sustainable concept of rural development is based on agriculture, processing industries and primarily rural and other forms of tourism. This concept is generally supported by development policies, and effects were analyzed in several scientific case studies [3, 4, 5, 6, 7, 8] and other scientific papers. Rural development is seen not only as a set of development policies with expected economic and other effects, but also as an overall transformation of rural society [9], strengthening awareness and local capacities in order to position itself in the region. These policies in the EU are based on the restructuring of family farms and national policy measures through lending, subventions, legal, economic, environmental and other measures — Common Agricultural Policy.

The social system transition in socialist countries changed the ownership structure, organization of production and chain links in the economic system, creating a crisis of social and demographic sustainability of rural areas. The crisis in rural areas development and capitalist and socialist systems has highlighted the need to reform in the field of law, economy, investment, infrastructure, spatial organization and multifunctional development for sustainability. Criticized state interventionism in socialist countries economies finds support in the new agricultural and regional policies of economic development of the European Union. The integration of development policies is necessarily preceded by a systematic survey of geosystems and socio-geographical indicators to identify opportunities, spatial conflicts and constraints on rural areas development.

The character of development processes, heterogeneity of rural areas (natural, social and cultural) exclude unique criteria for defining and differentiating rural areas on various bases, and thus planning. In terms of greater spatial integration into modern development processes, the purpose of classification into rural and urban space is called into question [10], unless if it is not in the function of practical needs [11], i.e. noticing and reducing development disparities. In the field of economics, the increased interest in rural areas has been transferred to the field of scientific theory and analytical approaches to socio-geographical research of rural areas in the function of regional development planning. Complex geographical research of the area of Balkan Peninsula began at the end of the 19th century when the Serbian geographer Jovan Cvijić established the foundations of Serbian anthropogeography. Since then, the rural area has been studied from various aspects of theoretical approach, the transformation of rural society under the influence of development processes and practical needs in the works of Serbian geographers: Dedijer, Filipović, Radovanović M., Jaćimović, Stamenković, Todorović, Mišković; and architects of rurists: Kojić, Simonović; sociologists: Ćirić and Mitrović; Croatian sociologists: Šuvar and Štambuk, and geographers Crkvenčić, Pejnović, Lukić and others. In the 1960s, geographers from the former Yugoslavia adopted a methodology for researching the functional structure of rural areas of the Polish Academy of Sciences, with which they collaborated. Geographical science in the

former Yugoslavia has developed different approaches to the study of rural areas. Part of geographers focused on examining natural conditions, others on economic-geographical factors — the “Belgrade” school. The socio-geographical approach was accepted from the “German-Munich” school and developed in the “Zagreb” school of geography. From the mentioned approaches in the geographical science of the former Yugoslav space, the geographical disciplines of rural geography — the study of rural geosystems with settlements and agrarian geography as a subdiscipline of economic geography have developed [12].

Materials and methods

The paper analyzes possibilities and limitations of applying an integrated approach to rural development in the context of understanding real problems of rural areas and implementing the concept of sustainable development on the example of the Republic of Srpska. Approaches and current development policies and strategic documents of the European Union with a focus on the Territorial Agenda are taxatively listed with review on the applicability in the Republic of Srpska [12]. Practices of other countries are given by citing scientific papers based on several positive experiences from case studies [3, 4, 5, 6, 7]. The change in the concept and strategy of rural development is seen through a comparative analysis of the approach to rural areas valorization, strategic documents of the European Union with a focus on the Territorial Agenda, scientific papers [9, 1, 12] and stated case studies. The development of geographical and other research in the rural areas of the former Yugoslavia is given by listing researchers and approaches to the study of rural areas from which rural and agricultural geography developed. The main goal of paper is to consider the development possibilities and limitations of the RS rural areas in context of new rural policies with the aim of revitalizing problem areas and establishing the concept of balanced spatial development.

The integral approach to the planning of the RS rural areas development derives from the current rural policies and experiences: Switzerland, EU, Japan, USA and others [1]. It implies consideration of the specifics of existing geosystems, complex valorization of the RS geospaces [1, 12, 13] and determination of development possibilities and limitations [14] on the basis of which adequate and long-term strategies of economic and social development are defined [2, 10, 11]. By analysing sociogeographical indicators from the 2013 Census [15], vital statistics, statistics of line ministry, changes in the spatial distribution of the population, age and household size, employment, agricultural activity, size of holdings and the occurrence of social stagnation were identified. By changes in spatial distribution and population structures, the size and functional capacity of settlement, development processes that differentiated the rural area in which the problem area of large spatial coverage is formed, about 60% of the RS area, are followed [14]. Its expansion indicates a crisis of demographic potential, functional weakening and atrophy of the settlement network and destruction of territorial capital, endangering the demographic and socio-economic sustainability of a large part of the Republic of Srpska. Demographic and socio-economic indicators confirm the differentiation of the RS area into relatively developed and underdeveloped areas [16], and thus the differentiation of development opportunities and development policies.

The genesis of problem was considered on the basis of historical-geographical method, comparison of scientific and professional literature, comparative analysis of statistical socio-geographical and demographic indicators. The indicators are statistically processed and synthesized in tabular and cartographic form. The field work at several sites confirms cabinet analyzes and indicates to the intensity of deruralization process, depopulation and rural atrophy.

Results and discussion

In Bosnia and Herzegovina area, the research in rural areas is modest. Development processes of industrialization and urbanization in the second half of the 20th century dynamically transformed geospace and differentiated development possibilities by pushing rural area out of the focus of economic, and thus scientific interests. The pronounced process of rural areas depopulation and other indicators of polarized spatial development indicated the necessity of an institutional approach to the research of rural areas. This was one of the key reasons for the adoption of the Law on Spatial Planning of BiH in 1978, development of spatial planning institutions and making the Study on Transformation and Spatial Planning of Villages in Bosnia and Herzegovina in 1985. The planned activities were interrupted by the disintegration of SFR Yugoslavia in 1991 and the Civil War in Bosnia and Herzegovina from 1992–1995. The former Yugoslav federal unit Bosnia and Herzegovina was organized by the Dayton Peace Agreement in 1995 as a state union of two entities (Federation of B&H and the Republic of Srpska) by the principle of the current spatial distribution of opposing ethnic communities in the war. Subsequently, the Brčko District was separated from the RS. This has led to the division of a large number of local self-government units (LGUs) and settlements, and migration that covers half of the Bosnia and Herzegovina population. Since then, there has been no serious scientific research or institutional planned approach to the revitalization of rural areas affected by destructive physical and anthropogenic processes. Subsequently, the Brčko District was separated from the RS.

The consequence of current administrative-territorial organization of Bosnia and Herzegovina is the great space fragmentation, settlement size degradation, functional underdevelopment and inefficiency of independent functioning of a large number of local communities. Bosnia and Herzegovina does not have a common Spatial Plan as an umbrella document for spatial development or other spatial planning documents that integrally treat space and geosystem management (hydro systems, forest, eco and agrosystems, infrastructure systems, etc.). The exception is Bosnia and Herzegovina Rural Development Strategy (2018), a document that registers existing resources, but without specific planning and binding activities.

The analyzed space of the RS has an area of 24,641.3 km², in which in 2013 there were 1,170,342 inhabitants, with an average population density of 47.5 inhabitants/km². The RS territory is organized into 64 local self-government units with large differences in size, population and achieved level of development. About 90% of the RS territory is rural area with about 50% of its population. It is differentiated by complex characteristics of geological structure, relief structure, climatic, hydrological, pedological and biogeographical characteristics. Based on their totality in the RS, three macro-regional units stand out: (Pannonian and Peripannonian, mountain-valley and sub-Mediterranean area) with specific geosystems that define natural conditions, spatial

dispersion of population, settlements and infrastructure, economic structure, i.e. overall development opportunities (Fig. 1). Hilly and low mountain areas (200–1 000 m above sea level) with over 50% of the surface dominate the relief. The Pannonian and Peripannonian area cover the northern part of the RS, about 47% of the total area, half of which is the lowland area most suitable for agriculture with the most valuable agricultural potential in Bosnia and Herzegovina.

It is the most densely populated area, concentrating 2/3 of the RS total population, a network of urban settlements, and it has developed infrastructure systems and is the axis of development of the RS [13]. Nevertheless, the network of rural settlements is slowly stagnating, which is evident from the comparative analysis of the number of inhabitants in the period of 1991-2013. The sub-Mediterranean area covers the south of the RS, it has small inhabitant number with a concentration of population in urban centers of low demographic and functional potential. The rural area is characterized by a high share of settlements in the process of spontaneous disappearance. Between these natural macro-units there is a mountain-valley area rich in forest ecosystems and intersected by rivers through which the traffic infrastructure passes, the main factor in the differentiation of spatial development of this area. The RS area is characterized by a wealth of ore, coal and water, natural heterogeneity and richness of forest and other ecosystems that enable the development of agriculture, forestry, manufacturing industries, energy and tourism. The beginning of the dispersed polyfunctional rural areas development and the rural economy in the late 80s of the last century was interrupted by the War.

The disintegration of economic system, deindustrialization, import liberalization and privatization of territorial capital have a negative impact the overall development, emphasizing the socio-economic and demographic sustainability of rural areas where agriculture and forestry exist as the only economic activities. Possibilities of establishing a more complex economic structure, which would enable socio-economic stability, due to poor labor potential and small holdings (average size of 3.5 ha), demand institutional support and a higher degree of organization. The food industry is in ownership, organizational and technological restructuring. The dynamics of closing down production cooperatives and associations of various types and re-establishment was emphasized. Although they have few members, their organization is extremely important for modernizing production and entering the market. The share of market-oriented agricultural farms is low and at the level of the RS is about 18%. According to estimates by the Ministry of Agriculture, about 45% of arable land in the RS is not cultivated. The method of valorization of natural resources (hydro potential, ore, forests) negatively affects the initiation of natural risks and the sustainability of geosystems and does not contribute to socio-economic development.

Based on the defined criteria upon the level of the RS local self-government units development [16] and other demographic and socio-economic indicators of development analyzed in the paper, developed and underdeveloped local self-government units were singled out. Observed development indicators; demographic (total population, population density, depopulation, increase in population, average age, literacy,...) and socioeconomic (share of employed population in total, share of primary sector and agricultural households, size of holdings, occurrence of social stagnation, etc.) indicate differences in the expressed values of developed and undeveloped areas (Tab. 1), on the basis of which the formed problem area in the area of the RS east and

along the line of inter-entity demarcation is observed [14, 12] where a large number of undeveloped LGUs are located (Fig.1).

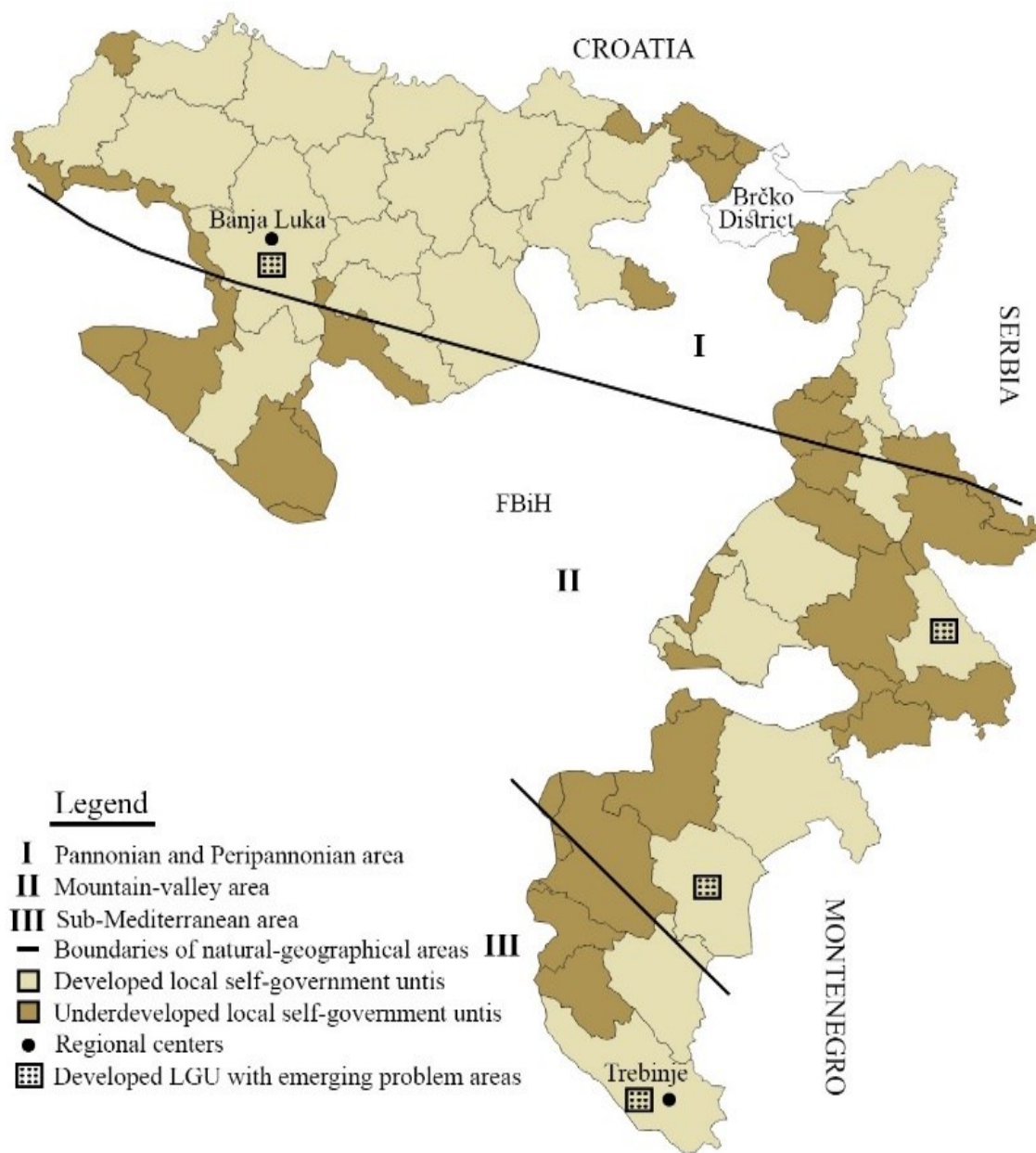


Fig. 1. Spatial differentiation of the Republic of Srpska development.
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Table 1

Demographic and socio-economic indicators of rural development in the RS

Increase in population 2016	Developed LGUs	Undeveloped LGUs	The RS level
Share in aras	66%	34%	100%
Population number changes from 1991–2013.	9 growth	2 growth	11 growth
	21 decline	31 decline	52 decline
Share in total population in 2013	84%	16%	100%
Population density (inh./km ²) in 2013	60,4	22,7	47,5
Share of extinguished settlements and settlements in extinguishing	17%	25%	20%
Number of settlements over 10 000 inhabitants	12	0	12
Increase in population 2016	from +0,4 to -10,4‰	from -1,4 to -19,4‰	-3,8‰
Average age of LGUs	38,4-44,9	39,3-54,5	41,72
Share of one-member and two-member households	48,20%	50,30%	48,50%
Share of pensioners	12,0–25,9%	8,8–29,9%	18,50%
Proportion of illiterate population	0,9–5,6%	1,3–28,9%	3%
Share of computer literate population	22,8–48,5%	7,7–32,5%	31,70%
Share of employed population in total working age population	35,40%	32,40%	34,90%
Share of employees in the primary sector of LGUs	1,5–41,1%	0,7–84,5%	17,60%
Share in the total number of the RS households	83,56%	16,43%	100,00%
Share of agricultural households engaged in agricultural activity in the total number of households at the RS level	77,1%	22,9%	100
Share of agricultural households in the total number of LGU households	31,1%	48,2%	34,5%
Share of fallow land and uncultivated areas in total fallow land and uncultivated area of the RS	70,5%	29,5%	100
Active cooperatives and cooperatives in establishment in 2019 — share in the RS	76,50%	23,50%	100%
Passive cooperatives, in extinguishing and extinguished cooperatives in 2019 — share in the RS	67,10%	32,90%	100%

Compiled according to [12, 15 and 16].

They are characterized by a weak demographic potential of high age average, negative trends in natural and migratory movements, low level of education and activity. In the area of underdeveloped local self-government units, there is not a single urban settlement with a larger demographic (10,000 inhabitants) and functional capacity. These demographic, socio-economic and functional characteristics do not favour the initiation of economic activities and multifunctional valorization of space, which in some countries gives positive results in the revitalization of rural areas [3, 5]. The interdependence of demographic potential and the degree of socio-economic development and the possibility of economic and cultural rural areas integration into modern economic policies is evident in the RS example.

In terms of natural geosystems heterogeneity and preserved cultural and historical heritage, the initiation of various forms of rural tourism is one of the most emphasized models of revitalization of rural areas in current rural development policies. The start-up of processing industries based on the structure of agricultural production occupies a significant place in the polyfunctional concept, and in the RS example, it represents the most developed industrial sector. Agriculture, industry and tourism, if harmonized, are not in conflict and complement each other. Sustainability of rural areas, through the establishment of new rural policies based on the polyfunctionality of rural areas, have the best perspective in more developed local self-governments in which there are also smaller problem areas recognizable by settlements in extinguishing (Fig. 1; Tab.1). They are formed in infrastructurally non-integrated areas of hilly and mountainous area, even in the hinterland of regional centers (Banja Luka, Trebinje). Underdeveloped local self-government units (problem areas) do not have the necessary demographic potential and infrastructure for more complex valorization of space and independent initiation of economic development, which is a basic limiting factor and necessarily need a greater degree of state intervention and assistance. Functioning of underdeveloped rural areas in Croatia, the so-called “areas under special care of the state”, is legally defined and functionally organized through special systems of providing services to the population [10], a high degree of protection of geosystems, and represents a potential model applicable in the RS problem areas.

Conclusion

The RS rural area is differentiated by natural basis and development processes into a more prosperous area (mainly Pannonian and Peripannonian area) and areas of manifested problem character (mainly mountain-valley and sub-Mediterranean area) which are displayed in population and rural economy structure. Revitalization of problem areas is conditioned by demographic potential, functional capacity of settlements and infrastructural systems. Access to European development funds is limited by Bosnia and Herzegovina status in European integration and is mainly possible through the concept of cross-border cooperation, which is weak [12]. The institutional approach to rural development planning and their sustainability have economic and geostrategic importance for the RS development. Rural area development planning takes place without systematic approach, clear goals and procedures and is based on the initiatives and capacities of local communities, limited by demographic and economic factors. Development problems prove the need to reconsider previous approaches to rural area research and to establish a critical attitude towards modern

concepts developed in other countries and their applicability in planning the development of rural areas in the Republic of Srpska.

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М. Мандич¹,
Д. Делич²

Проблемы развития и дифференциация сельских районов Республики Сербской

^{1,2} Факультет естественных наук и математики Университета Бая-Луки, г. Бая-Лука, Республика Сербская, Босния и Герцеговина
e-mail: ¹*mira.mandic@pmf.unibl.org*, ²*dragica.delic@pmf.unibl.org*

Аннотация. *Комплексный подход к возрождению сельских районов с целью устойчивого развития меняет восприятие сельской местности и устанавливает многофункциональную концепцию развития. Основное внимание в работе уделяется сельским районам Республики Сербской (РС), образованной в составе Боснии и Герцеговины (БиГ). Путем анализа социально-географических показателей пространственного развития проведена дифференциация РС по уровню развития. Рассмотрены возможности развития и ограничения выбранных проблемных областей, которые постоянно расширяются. Статья носит аналитический характер и возможность применения в политике возрождения сельских районов.*

Ключевые слова: *сельские районы, сельское развитие, Республика Сербская, проблемные зоны*

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