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## **TYPOLOGY OF RURAL AREAS ON THE TERRITORY OF MRKONJIĆ GRAD MUNICIPALITY**

### **SUMMARY**

This paper analyses the typology of rural areas in the municipality of Mrkonjić Grad. Rural areas represent a significant natural resource that needs to be maintained, properly used, and carefully managed, for the benefit of present and future generations. In addition to the previously determined geographical, demographic, traffic, climatic, geological, social, economic, infrastructural, agrarian and ecological characteristics of the area, the focus is on the research and analysis of the typology of rural areas from the standpoint of socio-professional structure and dynamics of demographic changes in Mrkonjić Grad municipality. Considering the great importance, but also the numerous problems that were observed during the research, the question of the future development and progress of the mentioned rural areas is actualized.

**Keywords:** rural areas, classification, socio-professional structure and demographic change, types of areas

### **INTRODUCTION**

Rural development is largely determined by the available resources and competitiveness of agriculture, but is also a result of geographical position, which has a great influence on vicinity or isolation in relation to the economic centres (Cvijanovic *et al.*, 2020; Despotović *et al.*, 2016). The transition process has also affected changes in the development of rural areas and their exposure to different physical, ecological, economic and socio-cultural pressures which contravene its value and qualities (Kosanovic *et al.*, 2016; Cvijanovic *et al.*, 2020). However, not all areas are equally affected by the transition process nor do they have the same basic features of rurality. Rurality is a regional geographical

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characterization that defines the nature of the external economic environment. However, the concept of rurality comprises a heterogeneous group of areas and may be too broad a concept to categorize the economic situation of “non-urban” regions (Laurin *et al.*, 2020). There are many classifications that define rural areas such as geographical classification, classification based on indicators of economic activity, classification depending on the degree of integration into the national economy, as well as new concepts in rural typologies and classification which are related to external pressures. By combining different indicators of rural development and their crossing, it is possible to observe specific characteristics of rural communities, on the basis of which they are classified into certain types. One of the starting points is the non-acceptance of the synonym that rural must mean agricultural area (Zakić and Stojanović, 2008), although, in the opposite sense - it certainly is. The key dilemma in the process of allocating rural areas refers to the different understanding in giving importance to the natural, economic, social, cultural and other aspects of rural phenomena. The key criteria for the separation of rural areas can be classified in (Simonović and Ribar, 1993): Demographic, starting from population thresholds; Physiognomic, which start from the degree of closure, ie population density or building density; Functional, given the necessary threshold values of the active population in non-agricultural activities for the settlement to have the status of a city; Legal, by applying legal criteria according to which certain rural areas have the status of a city and Combined, by applying a number of criteria.

Bosnia and Herzegovina is certainly one of the most rural countries in Europe, with between 40 and 60% of the population living in rural areas according to the definition used (UNDP, 2013). In the Republika Srpska, so far, no official division into urban and rural areas has been made using the OECD or some other methodology<sup>2</sup>(EC, 2014). If a modified OECD criterion for assessing rurality, population density of 100 inhabitants per square kilometre were applied to the territory of Republika Srpska, it would be obtained that 95% of the territory in RS is rural with 83% of its population. The average population density in Republika Srpska is 60 inhabitants per m2 (Ministry of Agriculture, 2015). All previous activities in the field of rural development in Bosnia and Herzegovina and Republika Srpska deserve attention, but it is still insufficient, given the level of development of rural areas. The activities of rural development must be dealt with not only by those who program and create conditions for development, but also by the entire development population to which development refers (Mirjanic *et al.*, 2010).

The aim of this paper is to identify and classify rural areas in the municipality of Mrkonjic Grad based on socio-professional structure and dynamics of demographic change classified as (Bogdanov, 2015; Kayser, 1990): remote rural areas, semi-agrarian rural communities, stagnant rural areas and

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<sup>2</sup> As part of the OECD method to identify predominantly urban, intermediate and predominantly rural regions, all local administration units (LAU) with a population density below 150 inhabitants per km2 were classified as rural.

transitional rural regions. Defining the types of rural areas on the example of one local community, would provide a basis for tailor-made innovation policy for lagging regions including economic, social, and political factors for the analysis of regions (Copus, 2001, p. 544).

## MATERIAL AND METHODS

Method of comparison of rural areas was applied on the territory of the municipality of Mrkonjić Grad according to the socio-professional structure and dynamics of demographic changes in the studied area. Transitional rural areas are characterized by generally favourable demographic characteristics. Such areas are in the transition phase from agriculture to industry, with a large number of employees outside the primary sector (Bilozor *et al.*, 2019; Djanibekov *et al.*, 2019). Semi-agrarian rural areas are characterized by a demographic decline, but with large agricultural resources that are actively used, there are also profitable farms that coexist with poor farms of small size and modest resources (Bogdanov, 2015). Remote rural area are areas in which more than half of the inhabited place is facing a large demographic decline, and which relies heavily on agriculture as a source of income (Brezzi *et al.*, 2011).

The paper selects three types of rural areas in the municipality of Mrkonjić Grad, namely Podrašnica as transitional rural area, Donji Barači as semi-agrarian rural area and Ubovića Brdo as remote rural area. All three types of rural areas differ in their geographical, traffic, social, demographic, tourist and other characteristics. This method serves us to compare the mentioned rural areas and show their differences.

The survey method was conducted in three settlements. The method was performed using a semi-structured questionnaire. The questionnaire contained 16 questions, open and closed, on the basis of which the results of the current situation and the situation in the 90s in the mentioned rural areas were obtained, which refer to the criteria of socio-professional structure and dynamics of demographic changes. The households in which the survey was conducted were selected by the snowball method (Goodman, 1961), so that one household recommends another household and so on until a survey of a given number of respondents is performed. The sample was selected based on the size of the population or the number of households, 20% in relation to the total number of households in the settlement of Podrašnica, 30% in relation to the total number of households in Donji Barači and 50% of the total number of households in Ubovića Brdo. In total 300 households were surveyed.

Historical method was also applied. The time determinant is the situation today and the situation in the 90s, i.e. just before the events that had a drastic impact on the demographic, economic and social picture of the Municipality as a whole and even different types of rural areas.

## RESULTS AND DISCUSSION

The municipality of Mrkonjić Grad belongs to the middle-developed municipalities, it is located in the south-western part of Republika Srpska, and in the western part of Bosnia and Herzegovina (Spatial plan of Municipality of

Mrkonjić Grad, 2016-2036). The area of the municipality of Mrkonjić Grad is located in the southern part of the Banja Luka region. In the last few years, as a consequence of the civil war, there have been sudden changes in the structure of the population on the territory of the municipality of Mrkonjić Grad. The events of the war initiated the processes of forced migration and displacement of the population. Population migrations resulted in changes in age, economic, gender and other structures, which directly affected the economy and further development of the municipality. Analysing the existing network in the system of settlements, a large degree of concentration of population and activities in the municipal centre Mrkonjić Grad and settlements around Mrkonjić Grad was noticed, while in the northern, western and south-western part of the municipality it is much rarer. The network of settlements can be defined as monocentric resulting from pronounced dominance of Mrkonjić Grad, the only settlement of urban character. Apart from Mrkonjić Grad, which has a dominant role as a municipal centre, a number of settlements appear, whose development and position in the area of the municipality indicate the formation of secondary centres (village community centres) in the hierarchy of settlements. Each of the three rural areas covered by the research belongs to a certain type of settlement classified as: remote rural areas, semi-agrarian rural communities and transitional rural regions.

Demographically, all three types of areas are characterized by a pronounced obsolescence of the population, which in remote rural areas leads to the extinction of the population in these areas. These areas have lost over 60% of the population in the observed period, and currently do not have any inhabitants belonging to the younger category of the population under 19. Depopulation of rural areas has been confirmed as a process that occurs through most counties in rural America (Johnson and Lichter., 2019) and in number of research papers across EU and non-EU countries, Italy, Spain, Sweden, Montenegro and other (Osti, 2010; Paniagua, 2017; Syssner J., 2020; Rodríguez *et al.*, 2021; Mickovic *et al.*, 2020)

Table 1: Change in total population between two Census years, per type of the area

| Type of the rural area    | 1991 Census | 2013 Census | Difference |
|---------------------------|-------------|-------------|------------|
| Remote rural areas        | 213         | 81          | 61,97%     |
| Semi agrarian rural areas | 525         | 287         | 45,33%     |
| Transitional rural areas  | 1096        | 733         | 33,12%     |

Source: Republic of Srpska Institute of Statistic

The aging index is over 40 in all three types of the regions, which is considered the situation when the population has entered the phase of pronounced aging. The largest demographic decline is in deeply rural areas where the participation of those under 19 has dropped to zero. The dependency index, which indicates the ratio of dependent categories (old and young) in relation to

the working active population, also shows unfavorable characteristics, i.e. that there are over 100 dependent people per 100 working able people, and over 300 in deeply rural areas. For remote rural areas it means the threat of demographic extinction. The pronounced aging process in rural areas is observed and confirmed by numerous research across Europe and the World. Pantic and Miljkovic in their research on regional differences between rural areas of Serbia also concludes the problem of depopulation and population aging as a dominant demographic issues (Pantic and Zivanovic Miljkovic, 2010).

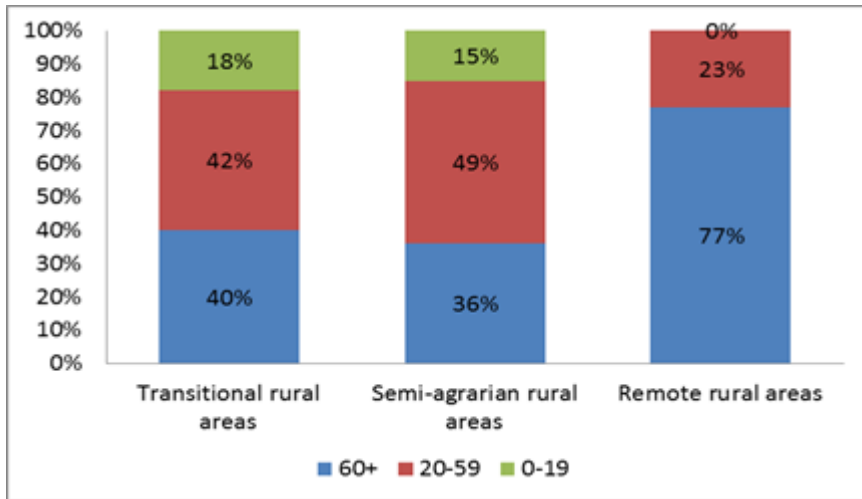


Figure 1: Age structure of rural household members, per type of the rural area, 2019 (Source: results of the survey)

Table 2: Changes in dependency ratio 2020 and 1991 Census

|                           | Aged Dependency Ratio <sup>3</sup> |        | Dependency ratio <sup>4</sup> |        |
|---------------------------|------------------------------------|--------|-------------------------------|--------|
|                           | 1991                               | 2020   | 1991                          | 2020   |
| Transitional rural areas  | 100,00                             | 220,00 | 114,28                        | 139,13 |
| Semi agrarian rural areas | 36,36                              | 240,00 | 75,00                         | 106,25 |
| Remote rural areas        | 28,57                              | 333,33 | 100,00                        | 333,33 |

(Source: authors own calculation based on surveyed data)

The size of the rural household also shows a trend of population obsolescence. Namely, in contrast to the situation recorded in 1991, when there were the most numerous households with 4 or more members in all types of

<sup>3</sup> (number of people aged 65+) / (number of people aged 15-64) \*100

<sup>4</sup> (number of people aged 0-14 + number of people aged 65+) / (number of people aged 15-64) \*100

areas, today such households are most numerous only in semi-agrarian areas, while in remote rural areas the most numerous are two-member households, and in transitional areas the household with three members. Smaller the household, more affected it is in social and economic terms. There is a range of research on different needs and challenges in accessing public services for certain types of households: couples and single people, working-age and pensioners, and households with and without children (Smith *et al.*, 2012) as well as size-related farms poverty problems (Smith *et al.*, 2012, Petrović and Milić, 2015, Grujić *et al.*, 2014).

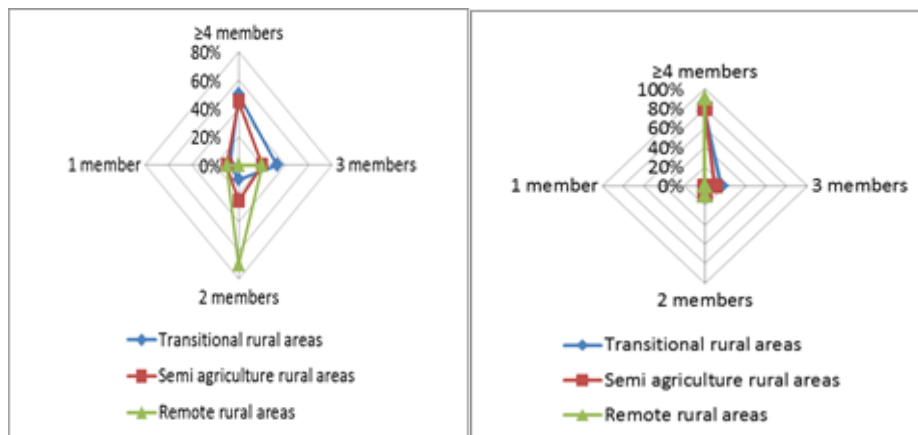


Figure 2: Changes in size of the household per type of the rural area, nowadays a) and 1991 b) (Source: authors own research)

The working status of household members is determined by changes in the demographic structure, so the most significant difference compared to the period before the 90s is in the remote rural area where the share of pensioners increased from 15% to 53%, while the agricultural population disappeared as well as the temporary residence population working abroad. It is also interesting that in these areas, agriculture activity on others farm is not present nowadays, and a new source of income was introduced, and this is unearned income such as rents, dividends or donations.

In the semi-agrarian rural community, it is interesting to note that sources of income in the non-agricultural sector were and remain dominant in total sources of income, which could even classify these areas as transitional rural areas, but other indicators don't prove such categorization. Entrepreneurship activity in these areas, however, is not developed in the non-agricultural sector, and the importance of agriculture is unchanged.

For transitional rural areas, a drastic decline in the importance of agricultural in relation to non-agricultural activities can be observed. The development of entrepreneurship is also noticeable, i.e. the number of private own companies in the non-agricultural sector.

Other research also confirms the tendency of rural households to diversify their income and thus provide a useful strategy in terms of managing disaster risk and improving social welfare but may also offer a new perspective for the research of vulnerability, resilience, and adaptive ability of rural social ecosystem. (Jinhong *et al.* 2016, Zrakić *et al.* 2019).

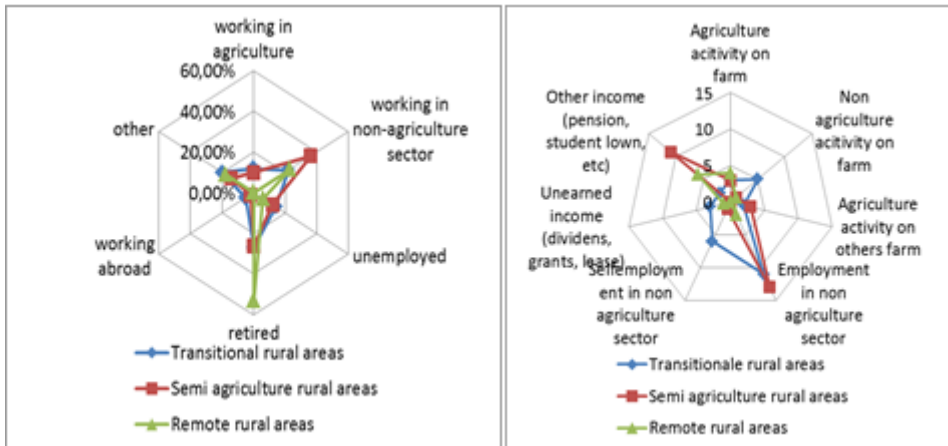


Figure 3: Working status a) and main sources of income of rural households b), per type of rural area (Source: authors own research)

Tourism activity on the farm as a form of income diversification is not developed, although all areas have the potential for tourism development. The infrastructure of the area has a potential for further development of both tourism and other entrepreneurial activities. According to Desić (2012), the basic problem of untapped potentials in rural tourism in Bosnia and Hercegovina is poor, and in some places non-existent infrastructure, low environmental and tourist awareness, both among the population and local authorities to solve problems and improve rural tourism. The same author believes that there is a lack of appropriate administrative and professional organization and training of staff, people are not educated to make the most of the potential they have, and that there is also a lack of developed information system, financial mechanisms, education, research and professional institutions, legislation and many other factors. Sehic-Krslak (Sehic-Krslak, 2018) states that the biggest problem faced by individuals who contribute to the development of rural tourism is primarily the legal framework that in Bosnia and Hercegovina is still not sufficiently defined for this area.

Dominant production system is in providing self-sufficiency, regardless of the type of area. A small part of the produced market surpluses of households are primarily sold directly on farm, while sales on the local or regional market are almost completely lost. According to the views of the respondents limiting factors for a higher level of resource use are insufficient level of farm investment, high fuel prices, lack of labour force, low purchase prices of their products. For the

inhabitants of deeply rural areas, the limiting factors are first of all age and illness, then poor infrastructure and lack of labour and mechanization.

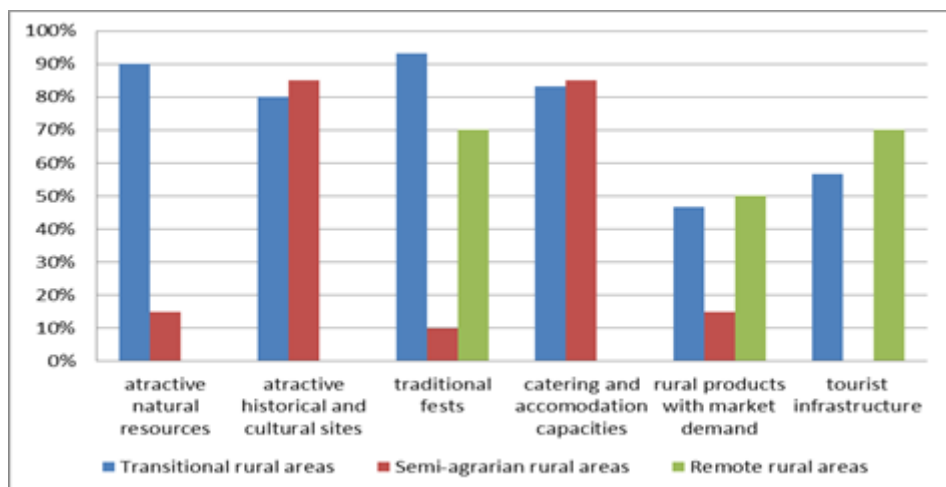


Figure 4: The most important tourist resources per type of rural area (Source: authors own research)

Table 3: Access to rural infrastructure and public services, per type of rural area (Source: authors own research)

|   | Transitional rural areas |      | Semi agrarian rural areas |      | Remote rural areas |      |
|---|--------------------------|------|---------------------------|------|--------------------|------|
|   | today                    | 1990 | today                     | 1990 | today              | 1990 |
| Water supply                                  | +                        | +    | +                         | +    | +                  |      |
| Electricity                                   | +                        | +    | +                         | +    | +                  | +    |
| Internet and cable network                    |                          |      |                           |      |                    |      |
| Lighting                                      | +                        |      | +                         |      |                    |      |
| Sewage  | +                        | +    | +                         | +    |                    |      |
| Garbage collection                            | +                        |      | +                         |      |                    |      |
| Public transport                              | +                        | +    | +                         | +    |                    |      |
| Primary school                                | +                        | +    | +                         | +    |                    | +    |
| Ambulance                                     | +                        | +    | +                         | +    |                    |      |
| Facilities for cultural and sports facilities | +                        |      | +                         | +    |                    |      |
| Local shop                                    | +                        | +    | +                         | +    | +                  | +    |
| Local market                                  |                          |      |                           | +    |                    |      |

This is the picture with all less developed countries in Europe, which is confirmed by studies by the European Parliament (2013): The relative rural poverty in some member states, and the hardship stemming from the economic recession, are factors contributing to the relative stability and in some cases the

proliferation of self-sufficient farms. The main economic role of self-sufficient farms is a welfare one, alleviating poverty by acting as a “social buffer” for households with few other assets and minimal other income sources. In five major member states, subsistence production contributes between 20% and 50% to the incomes of households at the risk of poverty. In the current recession, this welfare role has also been noted in Italy, Greece and Portugal.

In all three types of rural areas that are the subject of research, a significant improvements are noticed in the access to infrastructural facilities today and in comparison, to the period of the 90s. However, there are significant differences between different types of areas in infrastructure development (Table 3).

Infrastructure development according to the results of other research is determined by various factors, the degree of development of the country as a whole (GDP value), population density, urban versus rural area, and then depending on the typology of the rural area (Steckel *et al.*, 2017). On the other hand, the package of basic infrastructure today, apart from water, electricity, sewage, etc. has shifted to personal computer ownership and accessibility to the Internet. As a result, information infrastructure is becoming one of the factor endowments that determines the competitive advantage of rural areas (Fox and S Porca, 2001).

## CONCLUSIONS

The research results show a different level of economic activity in relation to the type of rural area, different levels of resource use, as well as different structure of available resources. There are also differences in the participation of primary activities (agriculture and forestry) in relation to sources of income from the non-agricultural sector. Agriculture as a source of employment in all rural areas is losing importance, and forestry and non-agricultural activities are taking precedence. Market channels for the placement of agricultural products are underdeveloped in all areas, and the share of direct sales on the farm is the dominant form of product placement. High dependence in the form of a relationship between the dependent and the working population leads to a low economic standard, a decline in the quality of life and weak motivation for further work and development. In remote rural areas, in terms of living conditions, lack of infrastructure and public services, there are no conditions for demographic renewal, while in other types of areas, demographic and population policy measures can still have an effect if applied in a short period of time. Compared to the period before the 1990s, we can say that the rural area of Mrkonjić Grad has been underdeveloped in the last 30 years, and that apart from investing in infrastructure, there are no examples of good practices of village modernization, income diversification, protection of rural heritage and other measures for development of rural areas. Urban areas have become saturated with migrations from remote rural areas which leads to increasing unemployment rate in suburban areas.

Tourism activity on the farm as a form of income diversification is not developed, although all areas have the potential for tourism development. The infrastructural equipment of the area is good for further development of both tourism and other entrepreneurial activities.

The solution for further economic development of these areas is in adapting interventions and development programs to different types of areas, where transitional areas should be directed towards the development of entrepreneurship activities, self-employment and new employment. Semi-agrarian communities require modernization of agricultural production and marketing, and remote rural areas are in need of outside intervention activities towards activation of resources either by investing in tourism, forestry or some other activity.

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