

Urban Planning in Bosnia and Herzegovina

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1 ABSTRACT

This article explains areal planning in Bosnia and Herzegovina in the system of regional planning, starting from government politics and circumstances, along with regional development perspectives through planning on local and municipal levels. (Nurković, R., 2011) The aim of this article is to present key issues of the modern areal planning in Bosnia and Herzegovina, as well as problems that cities are faced with. In that sense, the basis of everything is demographics, economics, environment, energy and traffic. Demographic averages in Bosnia and Herzegovina are important in determining urban areal planning of development in future. Numerous urban areas in Bosnia and Herzegovina are taken by dynamic urbanization. The consequence of that is small cities and villages have adopted the significance of suburban satellites. However, such position, without adequate planning, is not sustainable for long, and current advantages may be easily lost. Sarajevo functional urban region takes the central place in Bosnia and Herzegovina around the capital city of Sarajevo. It is the most prosperous urban planning area in Bosnia and Herzegovina, and it contains all functions of the typical European urban region.

Local communities within the urban planning of Bosnia and Herzegovina, in the conditions of mainly spontaneous transition, have taken over a significant role through which funds are directed towards urban areas with the purpose of their revivification and enabling a higher life standard for population settling in these areas. Rural potentials in Bosnia and Herzegovina are emphasized as the main precondition of efficient planning and usage, from the aspect of political and economic factors of development considering the physical characteristics of land.

Keywords: urbanisation, urban planning, development, local communities, Bosnia and Herzegovina

2 INTRODUCTION

Urban areal planning represents one of the most significant characteristics of modern development in Bosnia and Herzegovina. Spatial arrangement and urbanization make one important element of rational and humane use of space and development of economic activities, directing urban planning with technological factors of development and life needs of population in Bosnia and Herzegovina. Urban areal planning unfolds based on areal and urban plans that are in accordance with development of the activity sector in Bosnia and Herzegovina. Areal urban plans are social documents through which the politics of urban areal planning in Bosnia and Herzegovina are realized. Through urban and areal plans, a long term politics of city and area development is determined, and it is regulated by the areal plan of Bosnia and Herzegovina, the general urban plan of settlements and the detailed urban areal plan. (Nurković, R. 2012).

Until 1992, urban areal planning in Bosnia and Herzegovina was regulated by legislation that was founded on theories of the socialist economic development. In that period, plans were not flexible in urban planning of area development (for example, there was not a possibility of different intent to use land or a different development of urban settlements). Those plans assumed narrow goals of urban planning in Bosnia and Herzegovina. Urban planning in Bosnia and Herzegovina was developing on non-transparent way, where government institutions were only participants in the process of development of urban areal plans and their adoptions.

In 195, new laws on urban planning and spatial arrangement in Bosnia and Herzegovina were introduced. In that period, spatial arrangement was primarily defined as a government activity, and private sector had a possibility to significantly impact the decisions. These new entity laws were defective. Even though, they introduced participation of citizens in the process, they have not created a basis for using more flexible planning and development strategies (they were basically identical in content to the laws of the socialist period), and they have changed a lot. (Blaut, J., 1961) Due to that, new adopted laws in Bosnia and Herzegovina in 2010 had a mutual goal: to achieve efficiency in the area of urban planning and spatial arrangement through amendment of procedures in administration and through more flexible planning. The new legislation enables use of the new ways of urban planning in Bosnia and Herzegovina, including the

new implementation planning document. Amongst other obligation, Bosnia and Herzegovina must synchronize its areal politics with the European Union legislation in order to fulfill new criteria for membership. Bosnia and Herzegovina must abide by the principles of urban areal planning for the European continent contained in (European Commission's European Spatial Development Perspective-1999) and the leading principles (European Conference of Ministers responsible for Regional Planning) (2000), as well as other directives of the European Union relating to areal planning. (Čeme, A., 1999)

Dynamic development of urban planning in Bosnia and Herzegovina is especially significant on the grounds of high standard, great areal population mobility, and different values, where new processes of transformation of cities and urban areas are introduced, that is: suburbanization, counterurbanization, excavation and reurbanization. The common characteristic in all these processes is deconcentration and decentralization of city population and urban activities. From the modern perspective, Bosnia and Herzegovina has a small number of more significant urban centers. Besides Sarajevo, in the regional sense, the following are significant: Tuzla, Mostar, Banja Luka, Gorazde, Doboj, Prijedor, Brcko, Bijeljina, Bihac and Zenica.

3 METHODOLOGICAL POSTULATES

Urbanization development of urban settlements in Bosnia and Herzegovina with own specificities and moderately small areas requires using special methods. According to methodology of urban geography scientific methods have been used, such as methods of analysis and synthesis, mapping method, statistical method and descriptive method, method of field research as well as method of text analysis. Therefore, studying the general models and urban geography methodology in a combination with urban-geographic approach have been used. Agencies of the entity institutes for statistics, together with the Agency for Statistics of Bosnia and Herzegovina have been conducting a Survey on Urban Population in accordance with methodological rules and principles of the International Labour Organisation and requirements of Eurostat for five years, by which international comparability of data in the area of statistics of urban settlements has been provided. (Gillend, D., Lall, A.) As a basic method of collecting primary data sources, an interview method has been used, ie. an in-depth interview, where the main instrument was a reminder for an interview. About 25 urban settlements in Bosnia and Herzegovina have been surveyed. Research was also completed by an analysis of secondary sources contents, interpretation and description of adequate data bases of the Agency for Statistics of Bosnia and Herzegovina.

Today, Bosnia and Herzegovina is, like many countries in the world, in the stage of more emphasized polarized development. The effects of such development are expressed in many spatial processes and structures. In this structure, agriculture, protection of environment, planning the land use and economic planning, are treated as equal, but with different development under responsibility of different governmental agencies that are in contact with different groups for economic development. Bosnia and Herzegovina is under the fundamental constitution reform that will, among other issues, solve the basic issue of its administrative-territorial organization. Analysis is founded on various expert explanations, that is, clarification. Therefore, it is founded on determination, description and establishment of area reality in Bosnia and Herzegovina. It is one of the ways to reach expert analysis, some type of attempt of logical analysis of shape and process of creation of an area. All knowledge, gained through using scientific methods of research, is more or less relating to past events. Planners still need an image of past events, and this is why they are into visions, concepts, prognosis and projections, that is, planning future considering desires and development possibilities. Analysis provides “knowing and theoretically organized cognitive results” and other forms of cognitive results from various professions about various elements, occurrences and processes of area structure. Determinations in an analysis are founded on facts about area, which are a result of research of numerous professions. Facts must be true, correct, attested and gathered from a primary source, regardless if they are a result of real area relations or historic documents. Authentic facts about area create an expert foundation, that is, they ensure it a scientific character. Based on the named methodological approach, we present steps taken in expert analysis on areal planning, which we used during the creation of expert materials for the Strategy of area development planning in Bosnia and Herzegovina, and these are as follows:

- Situation analysis;
- Situation evaluation;

- Development possibilities;
- Area visions;
- Area development versions.

4 ANALYSIS SUBJECT OF AREAL PLANNING IN BOSNIA AND HERZEGOVINA

Planning has geographic, time, function and institutional spread. Time spread comes from direction of planning into the future. From past, it includes elements and factors that are of foundational significance for analyzing existing conditions of future development, that is, it is used for determining possible and desired changes and pathways to them (Friedmann, 1987). Areal planning deals with questions of areal establishment of development on a significant comprehension, to have an area of limited ability to establish development and growth, rather than on its general disturbances. It would be very unsure if areal planning would separate, that is if it would move away from development interests. The core subject of areal planning (we mean planning subject, that is, what is being planned) is especially areal. Material planning subject is an area as a physical reality, its formal subject, then deciding on “reaching into area”. The final intent of planning is surely influencing changes of the material subject – area. The word area is used in its widest meaning, since it is not limited only to tridimensional geometry, rather, it is its economic and psychological and perceptible area. With such analysis, we are interested in what is happening with the area in Bosnia and Herzegovina. In that context, from the foundational meaning, it is “area quality” relating to attempts of its merging, that is connecting social values with changes and stabilities of areal structure. Area quality is changing, and besides that, its relative location is changing as well, and finally, its geographic spread is changing. Changing area structure, occurrences and processes, and their facts, impacts changes of relative position of provinces and regions within the global models of areal relations. (Čeme, A., 1999)

Areal planners are most often interested in area spread of economy and society as a whole. Because of that exactly, special attention is paid to area relations between social and economic activities, that is, area structure where those activities are performed. Planners must get introduced with the size and location of economic area and its function, that is, area relations between activities. Regardless of that, since real area is distorted due to economic and psychological factors, it must be the core subject of interest for planners to study mutual area relations in real (geographic) area. From the area perspective, foundational significance is that development has an area component, meaning spread. For manufacturing and consumption, area disparity is significant, in order to overcome distance in area, we need time, energy and money. All activities are such or different users of area. Area aspect, today, is proportionally very different from first understanding of that concept, even though, the concept of area, that is area concept, was always accepted.

5 URBAN POPULATION IN BOSNIA AND HRZEGOVINA

Urban population and its share in total population are among more relevant indicators of urbanisation level in Bosnia and Herzegovina. The pronounced differences between total population growth, which is low, and relatively high urban population growth correspond to adequate stage of demographic transition with a low rate of natural growth, and so called industrial stage of urbanisation with a strong concentration in cities. In earlier periods Bosnia and Herzegovina also recorded a rapid growth of urban population as well as other neighbouring countries (Nurković R, 2013).

In many developing countries rates of growth of total and urban population as well as their differences are considerably bigger, while in developed countries rates of growth of total and urban population are low, and differences between them are insignificant. These data may be used as an orientation for evaluation of development of our country and its parts. High rates of urban population growth are certainly indicators of population concentration in the cities. Such is the case with Bosnia and Herzegovina. Development of total population also confirms this. Observing from contemporary perspective, Bosnia and Herzegovina has a small number of more significant urban centres. Sarajevo city, according to first official Austro-Hungarian census had 21.377 inhabitants in 1879. Despite the frequent war events, natural disasters and similar difficulties, population number in Sarajevo had been increasing rapidly, so, according to estimations about 750.000 inhabitants lived in Sarajevo in 2015. Except Sarajevo, Tuzla, Mostar, Banja Luka, Goražde, Doboj, Prijedor, Brčko, Bihać and Zenica are significant in regional sense (Table 1 and Figure 1).

City	1879.	1885.	1910.	1971.	1991.	2015
Banja Luka	9.560	11.357	13.566	158.736	195.692	225.000
Bihać	3.097	3.506	3.943	58.185	70.732	63.000
Brčko	2.901	4.281	5.998	74.771	87.627	100.000
Goražde	846	1.226	1.460	34.685	37.573	17.000
Doboj	1.351	1.749	2.768	88.985	102.549	80.000
Mostar	10.848	12.665	14.370	89.580	126.628	112.000
Prijedor	4.681	4.746	4.999	97.894	112.543	95.000
Sarajevo	21.377	26.268	38.083	359.452	527.049	750.000
Tuzla	5.119	7.189	10.227	107.293	131.618	174.000
Zenica	2.101	3.073	4.226	60.910	145.517	118.000

Table 1: Review of population number in more significant cities of Bosnia and Herzegovina, 1879-2015

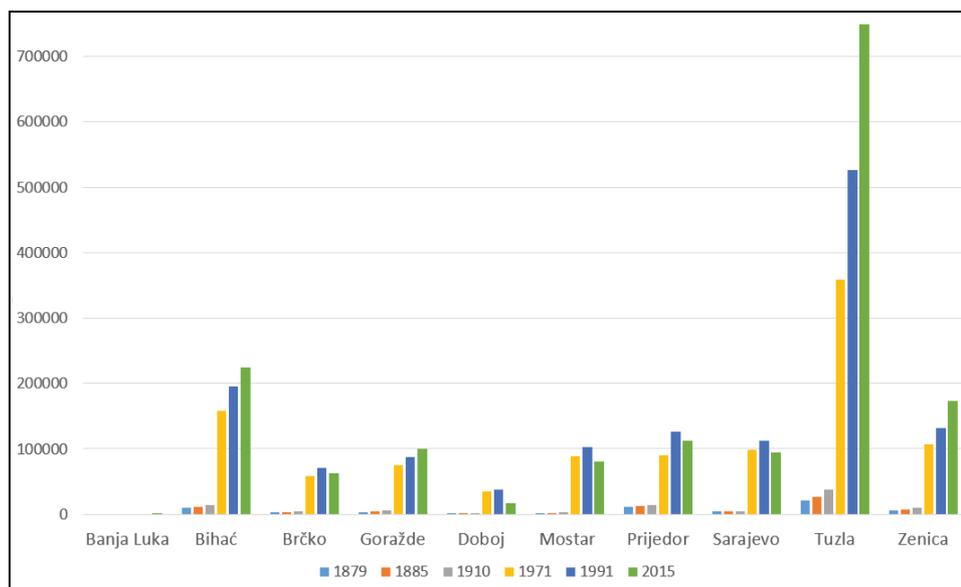


Fig 1: Review of population number in more significant cities of Bosnia and Herzegovina, 1879-2015

The mentioned directions of urbanisation are mainly followed by main lines of communication, which shows the significance of traffic accessibility in their appearance. The same conditions are also present in other regions of Bosnia and Herzegovina. Dynamics of urban settlement development and expansion of the urbanised zones in Bosnia and Herzegovina show the polarisation tendency in urbanisation process. Distinguishing the urban settlements in Bosnia and Herzegovina is a permanently present problem. With development of various activities, primarily of industry and mining; in particular, urban settlements had been developing production of different industrial products and services, not only within their borders, but also in a broader gravitation area. However, in practise of differentiation of settlements in Bosnia and Herzegovina, a small number of indicators had been applied. Most commonly this was a settlement size, then people's lifestyles, which was mostly expressed by ratio of agricultural and nonagricultural population, and other relative indicators. In 2010, there was diversity in distinguishing urban settlements in Bosnia and Herzegovina. As it is known, Institute of Statistics of Bosnia and Herzegovina separated three categories of settlements: urban, mixed and rural. For these categories a model of settlement size and participation of non-agricultural population was applied. It may be concluded that this model satisfied the needs of differentiating the settlements in 1981 but in differentiation of settlements some shortcomings have appeared. Therefore, it was necessary to adjust a model of differentiating the urban settlements with the existing development level.

If the separated cities of Bosnia and Herzegovina are analysed on the whole as a unique urban system, edifying results are obtained. In order of urban settlements size, which indicates to hierarchic features of urban system, a certain irregularity was noticed that was present in urban development of Bosnia and Herzegovina in earlier periods as well. The first thing to notice in order of urban settlements size in Bosnia and Herzegovina is overemphasised size of cities of Sarajevo, Banja Luka, Tuzla and Mostar, actually of the largest urban settlements, in relation to other settlements. Differences in urban population share, respectively the urbanisation level, are consequences of unequal dynamics of urban settlements development in all areas of Bosnia and Herzegovina. These differences are noticeable from data that were present in the first decade of the 21st century. For this purpose, it is possible to analyse dynamics of total and urban population growth

in the period 1981-1991. As the data on population numbers in 1981 and 1991 are not comparable due to different criteria of separating the cities, it is possible to compare urban population of separated urban settlements according to mentioned model in 1981, as well as the population of cities in 1991.

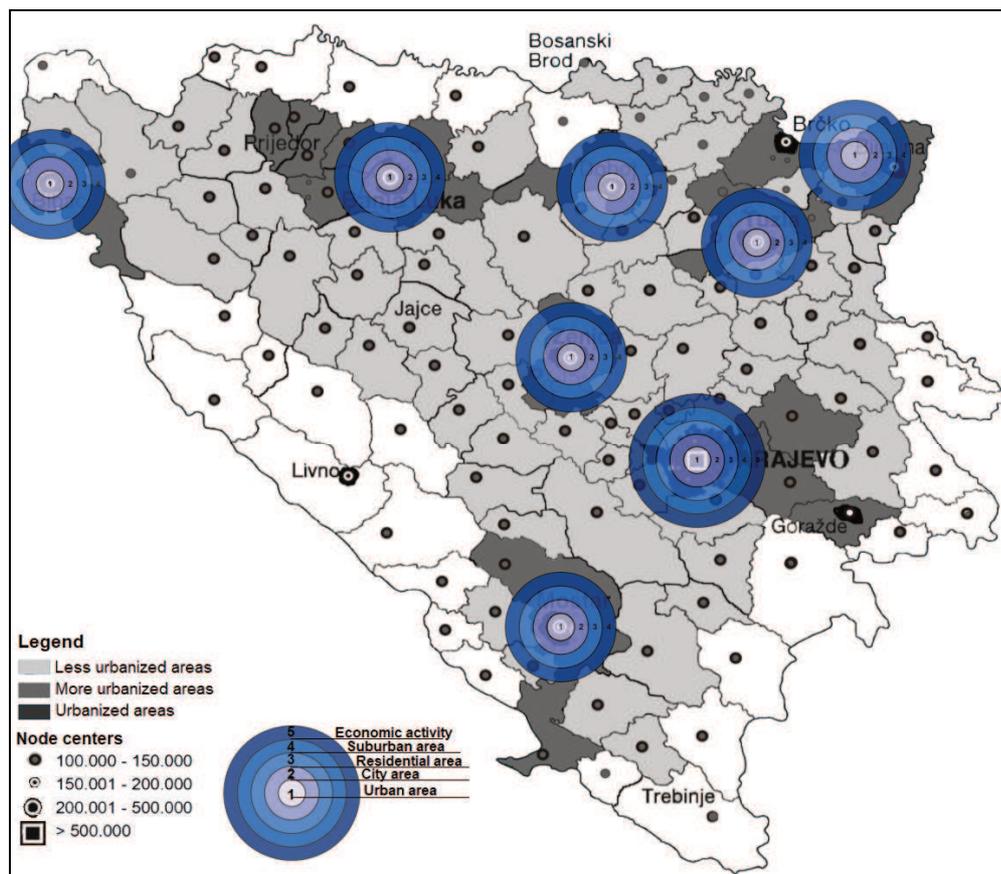


Fig 2: Urbanisation level of urban settlements in Bosnia and Herzegovina, 2015. Author: Nurković, R.

Comparing the growth of total and urban population in Bosnia and Herzegovina in the period 1981-1991, it should be emphasized, first of all, that total population growth in Bosnia and Herzegovina was 38,2 %. Differences between the growths of total and urban population were big. Sarajevo, Tuzla, Zenica and Banja Luka are the hubs in urban network of Bosnia and Herzegovina, more important than others, because they are the centres of larger number of connections. Such hubs have good accessibility. Settlements in which there are the largest numbers of central functions have the highest accessibility, as it is a precondition of a better spatial organisation. The least accessible hubs are in South and East Bosnia and in West Herzegovina. These are: Foča, Goražde, Trebinje and Livno. (Nurković, R., 2012)

Data on number and dynamics of urban settlements growth in Bosnia and Herzegovina are available, so it may be judged according to census data from 1961, 1971, 1981 and 1991, as well as according to estimations for 2011. Until 1991, Bosnia and Herzegovina had 109 municipal centres, respectively urban settlements. In 2015, after the war events and a new territorial arrangement, Bosnia and Herzegovina had 141 municipal centres, which is more by around 30% than twenty years ago. With the changes in structure of settlements according to size and with an increase of number and size of cities, urban systems of the regions have changed as well as the country's urban system on the whole. In these changes, a positive trend is also noticed, respectively creation of regular urban systems. Degree of primeness in Bosnia and Herzegovina was more than two. Data on population number in cities of Bosnia and Herzegovina refer to certain differences in courses of urbanisation of the regions as well as to differences in development of single agglomerations. Namely, it is obvious that in single regions a process of pronounced concentration is present, first of all, in regional centres, and that in some other regions polycentric urban development, with metropolization tendency is more expressed.

6 LAND VALUES IN URBAN PLANNING

According to (Nurković, R., 2012), theoretically, open land auctions have created two different and mutually related patterns of distance decrease. One relates to land values, and the other relates to population density. As the principal states, as the distance increases from CBD, the population density decreases. With one important variation, the pattern of urban planning of population density in the more central settlements of Bosnia and Herzegovina shows a comparative order of distance decrease. Still, the accessibility is attractive to numerous residential users and it brings its tax to high land prices. However, we should also take into account urban planning in Bosnia and Herzegovina and that the accessibility is not decreased only in the horizontal direction – distance from the center towards the outskirts, but also in the vertical direction – from the ground floor towards the higher levels of the city. According to that, there is a zonality of using space in the vertical direction (Figure 3).

Nevertheless, planned creation of new centers in Bosnia and Herzegovina, or new poles of attraction, may create a balanced areal system along with the existing ones. In the development of urban planning of cities in Bosnia and Herzegovina, tendencies of centralization and decentralization are very noticeable. Through centralization, increase of land use is emphasized, along with development of new economic activities, which leads to expansion of urban planning. For example, in Bosnia and Herzegovina, possibilities are created to move population from the city center to spacious city outskirts, where new peripheral settlements are built with smaller city centers, and cities are expanding over large areas.

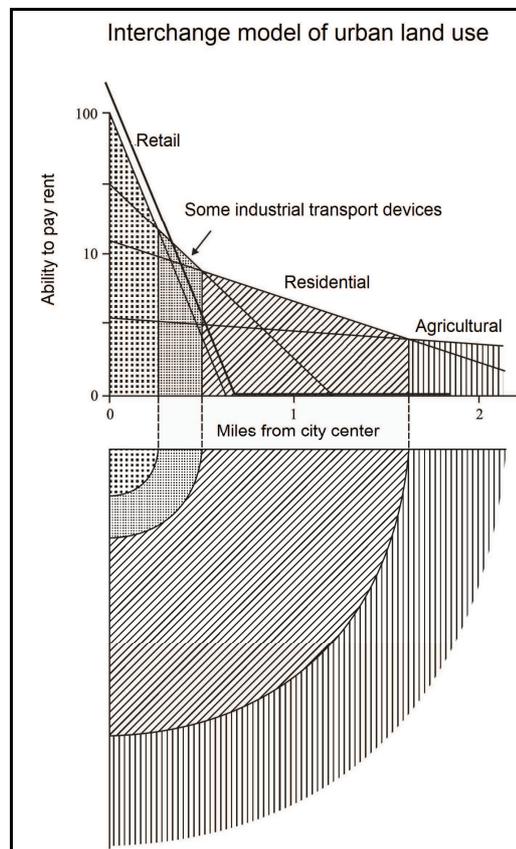


Fig 3: Economic model of urban use of land in Bosnia and Herzegovina

7 URBAN SYSTEM IN URBAN PLANNING PROCESS

Here, we are speaking of the process of urbanization in Bosnia and Herzegovina encouraged by the industrialization through mass employment of rural population in city centers. In the population structure and the degree of urbanization of Bosnia and Herzegovina, from one year to another, greater and greater changes occurred. Bosnia and Herzegovina had 38.2% of city population in 2011. Urban areas in Bosnia and Herzegovina were considered as a system, integrating physical, social, economic, ecological, environmental, infrastructural and institutional subsystems, where urban expansion is the result of change in function of these subsystems. Discussions with experts and conducted surveys identify problems of urban systems in Bosnia and Herzegovina, while forming models reveals that there are three controlling parameters, such as

population, connection and functions responsible for urban expansion in the system (as represented on figure 4).

Population in Bosnia and Herzegovina acts as the basis of the existence of urban planning. Every change in population directly affects functioning of the urban system. Increase in population, at the expense of natural growth, migration balance, leads towards variation in functioning of the urban system and it is subject to urban expansion, if they are not affected adequately. Connection of urban planning in Bosnia and Herzegovina provides a vital connection in interactions of human activities in tangible and intangible forms, in and outside of the urban system. Each change in connection on intercity and intracity level at the expense of economic prosperity is empowered by technological progress, and it leads to dispersion/reorganization of population and function, in and outside the urban system, and it is subject to urban expansion, if they are not affected adequately. Functions act as one of the most important dynamic entities in the urban system. Urban systems contain different types of functions, such as social and economic ones. (Denmark Lovvards 2018, 1992)

Each change in functioning in the conditions of scale or any other variation in them directly impacts the urban system, attracting more and more population, which leads to urban expansion, if they are not affected adequately. (Christensen, K. S., 1985) The work of these mutually dependent parameters, on an individual level or combined together, leads to change in the total functioning of the urban planning system, and it results in urban expansion, if it is not affected adequately. This is why these important controlling parameters must be taken into account when forming politics and useful guides for sustainable development of a system without urban expansion (Chadwick, G., 1971). Transportation of goods, people and services is conducted through traffic connections, such as railroads, roads, air links, telephone connections or other forms. Urban system is developed and it acts as a whole. Changes in one element condition changes in the whole system. Development of large cities in the urban system affects development of towns, therefore, the differences between them are not significantly changed. Concept of the urban system relates to a series of towns and cities, which are connected in such way that any change in population, economic vitality, employability or providing services has consequences for other areas.

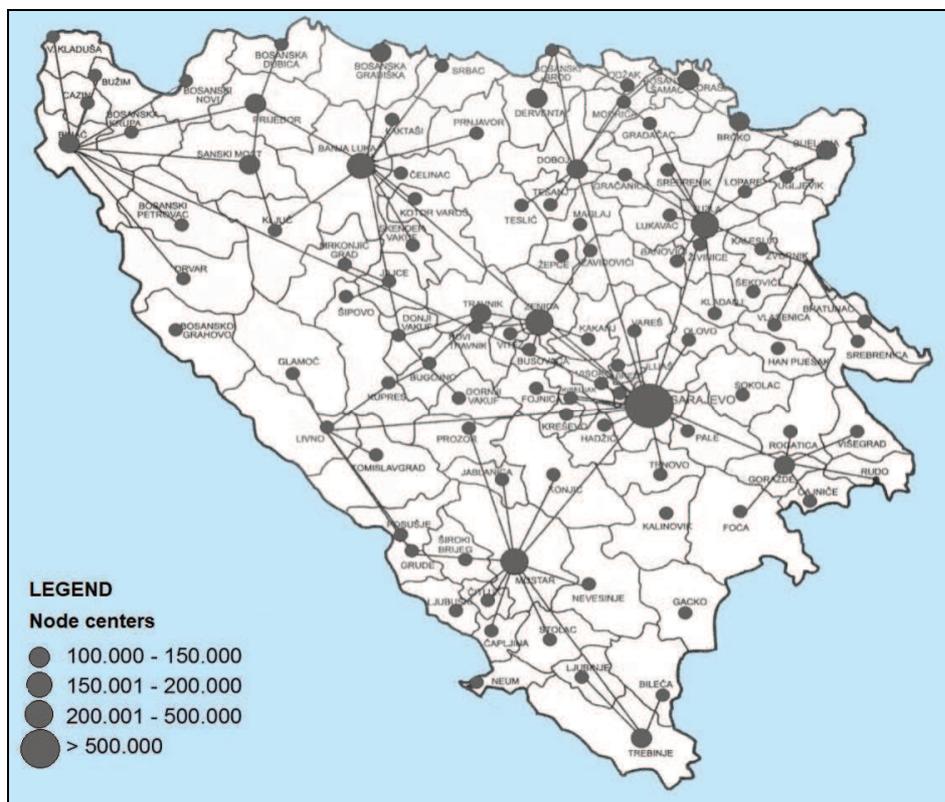


Fig 4: Network of regional and subregional centers in Bosnia and Herzegovina, 2015. Autor: Nurković, R. (2011)

Population in Bosnia and Herzegovina is very uneven. Special population characteristics occurred in the period after 1995, when it came to great movement of population from Eastern parts of Bosnia and Herzegovina towards the middle, and also from other parts towards the border areas and outside borders into

neighboring countries of Croatia and Serbia. Recent population disposition in Bosnia and Herzegovina was not a subject of interest of any geographers almost ever. Similar to countries of the former Yugoslavia, urban system of Bosnia and Herzegovina has also developed gradually. In the nineteenth century, urban system of Bosnia and Herzegovina has started to transform in a more powerful way under the influence of deagrarization and industrialization. Settlements that have represented industrial centers – Tuzla, Sarajevo and Zenica – have started to expand. At the beginning of the twentieth century, urban system has already had its hierarchical level. The greatest level of centrality was Sarajevo, then Tuzla, Banja Luka and Mostar. At the same time, through strengthening of these cities, a slight occurrence of forming regional centers – Bihac, Doboje and Foca – has started. According to data from Agency for Statistics of Bosnia and Herzegovina, Bosnia and Herzegovina has become a country with over 140 city settlements in 2010, and with the same number of municipal centers. Many of these city settlements were created through dying of mountain villages taken by deagrarization. The largest number of cities has up to 20,000 residents, while there is a small number of cities with over 100,000 residents. Amongst those are Sarajevo, Banja Luka, Tuzla, Zenica, Mostar, Bihac and Brcko, and they are regional centers as well. Also, amongst those, great differences are noticed, from the aspect of population and also the social-economic and political significance (Nurković, R. 2012).

Size of cities that make the urban system of Bosnia and Herzegovina should be discussed on the basis of distribution of numerous factors. Cities in Bosnia and Herzegovina will occur in various size. Surely, the occurrence of a small number of large cities will also be present here, such as in many countries in the world. For the area of Bosnia and Herzegovina, it is possible to apply the criterion of city size according to the following classification:

- Up to 5,000 residents, settlements, towns, boroughs
- From 5,000 to 20,000 residents, towns
- From 20,000 to 50,000 residents, medium cities
- From 50,000 to 100,000 residents, cities
- From 100,000 to 200,000 residents, large cities.

Distribution of cities in Bosnia and Herzegovina, according to the Rank-size rule, unveils that the urban system of Bosnia and Herzegovina is very complex. It is made up of the global government urban system and eight regional urban systems. Both of these systems are a consequence of historical, economic and political opportunities. In the period after 2015, there were great changes in the urban system of Bosnia and Herzegovina. Through migration of population due to war events, it came to sudden strengthening of cities of Sarajevo, Tuzla, Bihac, Brcko, Zenica and Bijeljina. Contribution to strengthening of named cities is given by an intensive process of suburbanization, due to which cities expand, and in a very close future, it will come to a complete accretion of parts of a cities with a neighboring city settlements. Radial expansion of the named process is especially emphasized in Sarajevo, Mostar, Tuzla and Banja Luka. We may conclude that traffic connections in named directions have enabled the development of suburbanization. They are very important intersecting connections with Sarajevo, and they have a certain function of activity as its gravitational zones of daily migrations (Nurković, R., 2013).

8 CONCLUSION

Urban areas of Bosnia and Herzegovina will be integrated into an urban network of Europe (Euro-regions) through regional cooperation, formation of urban center networks and development of multimodular transport corridors. It is valued that this concepts fits the new process of urbanization, which is characterized by a polycentric urbanized regional area, strong communication corridors, regional classification of work, as well as various advantages related to living environment.

The ideas of understanding new conurbations, as competitive parts of the European urban system, may be applied on already formed agglomerations of Bihac, Banja Luka, Tuzla, Zenica, Sarajevo and Mostar. Sarajevo areas should be treated as a metropolitan region, which will form as one of the more significant centers of the South-East Europe. For urban continuity and cultural identity of Bosnia and Herzegovina, historical heritage has a special significance, therefore, it is necessary to ensure its revival and inclusion into development, as a part of the European cultural heritage. Through areal planning of Bosnia and Herzegovina,

an area of natural values was planned, with about 16% of the total area of Bosnia and Herzegovina, and it should be planned through special areal plans of special areas in order to protect it and include it in the natural heritage of Europe and the World. Cities have a great significance as development centers and generators of development, which makes them intersections in areal organization and development of Bosnia and Herzegovina as a whole. Approach to the conception of the new Law on areal planning should be based on European areal guidelines and legislative experiences of the European Union countries. All levels of planning, as well as organization of institutions for creation and enforcement of plans and sources of funding, should be resolved by law.

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