

# POSSIBILITIES FOR THE DEVELOPMENT OF THE LOWER DANUBE SECTOR IN THE REPUBLIC OF SERBIA

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*Key-words:* potential, local development, economy, Danube, Republic of Serbia.

**Abstract.** The Danube Region in Serbia has a huge potential for the growth of agriculture, energetics, industry and tourism. However, these resources are not equally utilized in all parts of the Danube Region. The middle part is the most developed one of the Danube Region in Serbia, with the largest cities of the state, the biggest concentration of production, capital, traffic and population. In contrast to that part, the lower one of the Danube Region in Serbia, despite its huge resources, still lags behind other parts of the Danube Region. The Lower Danube sector has a great potential for the development of agriculture, especially horticulture. In this part, the Danube had the largest hydropower potential and excellent nautical characteristics. Also, here are reserves of mineral resources and excellent conditions for tourism development. The Lower Danube sector in Serbia represents a historical-ecological tourist zone due to its numerous natural and cultural resources. The paper presents all the potentials of this area, but also its limitations that prevent its development. Special attention is paid to the importance of investing in infrastructure which is an important basis for development.

## 1. INTRODUCTION

The Danube River Basin covers more than 800,000 square kilometers – 10% of continental Europe – and extends into the territories of 19 countries. This makes it the most international river basin in the world. Over 80 million people live in this area, many of them depending on the Danube for drinking water, energy production, agriculture, and transport (ICPDR, 2015). The Danube basin in Europe can be viewed as a kind of conceptional region culturally, politically, economically, and ethnographically heterogeneous (Trócsányi, 2010).

The Danube Region in Serbia is not yet defined as a separate regional entity and there are different interpretations of the concept and spatial coverage of the Danube Region in the territories where the Danube represents a much wider physical boundary, related to functional significance and gravitational influences. According to a narrower definition (the narrower belt along the Danube), the Danube Region covers an area of 18,290 km<sup>2</sup>, but speaking only of the municipalities with direct outlet to the Danube, this region in Serbia would include territories belonging to 24 local self-governments, in effect 29, if we would add the 6 urban municipalities within the city of Belgrade that have direct access to the Danube (Milanković, 2015).

The defined area covers 13,494 km<sup>2</sup>, or 15.2% of the territory of the Republic of Serbia with 28.3% of Serbia's total population. If we would count all urban municipalities of Belgrade (even those without exit to the Danube), the share of population would be as much as 31% of the total population of this country, which means that almost a third of Serbia's population lives in this region, which confirms even more its significance. Tošić and Živanović (2011) emphasize that the area of the Danube belt, due to its exceptional importance, has led to a higher concentration of production, capital,

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traffic, population and settlement in that part of Serbia. Therefore, we may conclude that the Danube axis has an exceptional potential for the development of agriculture, energetics, industry and tourism.

The Danube was the central river of SFR Yugoslavia, but after its breakup the Danube became a border between the Republic of Serbia and the Republic of Croatia, which had a great influence on the development of this area, since the upper Danube sector used to represent the central part of a single country, being now coterminous (Šećerov & Nevenić, 2004). Unlike the upper sector, the Lower Danube sector has always been conceived as a border with Romania and Bulgaria.

The research in this paper covers all the segments of economic development in the Lower Danube sector which can contribute to the development of this part of the Danube Region in the Republic of Serbia. The aim of the paper is to highlight the potential of this area in hydropower, agriculture, tourism and infrastructure as main drivers of development. In addition to the explored potentials of this area, also development restrictions are emphasised.

## 2. METHODS

Numerous authors dealt with the development of the Danube Region (Šećerov and Nevenić, 2004; Mihić *et al.*, 2011; Tošić and Živanović, 2011; Demonja, 2012; Vujko and Gajić 2014; Gajić *et al.*, 2015; Voicilaş, 2017, etc.). Research by Demonja (2012) is based on secondary sources, analysis of approaches and views on the Danube Strategy and its importance for the Croatian Danube Region. Voicilaş (2017) highlights and analyses the economic and social processes that took place in the “Upper Pruth” Euro-region in Romania. The author identified the assets of this space by analyzing the following categories of indicators: population and labour force, social and cultural dimensions, agriculture and forestry, other economic activities, transport and technical infrastructure.

The data for this survey were collected for 29 municipalities with direct access to the Danube River in Serbia. The main social and economic indicators found in national statistics were used. The following categories of indicators were considered: population, agriculture and forestry, hydroenergy and mineral resources, tourism and infrastructure, as the biggest drivers of the development of this area.

It was necessary to collect population data for the 1948–2011 period in order to determine the numerical change in the population of this area. The data used, collected from the data-base of the Statistical Office of the Republic of Serbia, made it possible to obtain population density values.

In order to highlight the area’s agricultural potential, the authors resorted to the Agricultural Census 2012 data (Agriculture in the Republic of Serbia, 2012). For infrastructure, traffic and inland waterways, the data to use were found in the official publication “Transport, Storage and Connections Bulletin of the Republic of Serbia“ and in the European Conference of the Ministers of Transport. The collected data afforded reaching the basic results of the investigation and point out the development potentials and limitations in the Lower Danube sector in Serbia.

Based on the possibilities and constraints in the economic development of the Lower Danube sector, a SWOT analysis can be performed. A SWOT analysis clearly identifies the strengths and weaknesses (Voicilaş, 2017) of this area. Also, the SWOT analysis presented all the opportunities that this region offers, as well as the threats that will affect future development.

## 3. RESULTS AND DISCUSSION

Having in view that the Danube sector in Serbia displays different geographical, administrative, historical and political characteristics, this area was divided into upper, middle and lower sectors (Fig. 1).

The Lower Danube sector in the Republic of Serbia encompasses a part of the Danube that flows through the country along 588.8 km, that is, the section from Bezdán (1,425 km, on the border with Croatia) to the mouth of the Timok to the Danube (846 km, on the border with Romania and

Bulgaria). The Danube Region is located on the territory of Central Europe in the southern part of the Pannonian Basin and in the northern part of the Republic of Serbia (Milanković, 2015).

The Lower Danube sector includes five municipalities with direct outlet to the Danube (Veliko Gradište, Golubac, Majdanpek, Kladovo and Negotin) its relief covering the area of the Djerdap Gorge and the Vlach-Pontian lowland Danube flow.

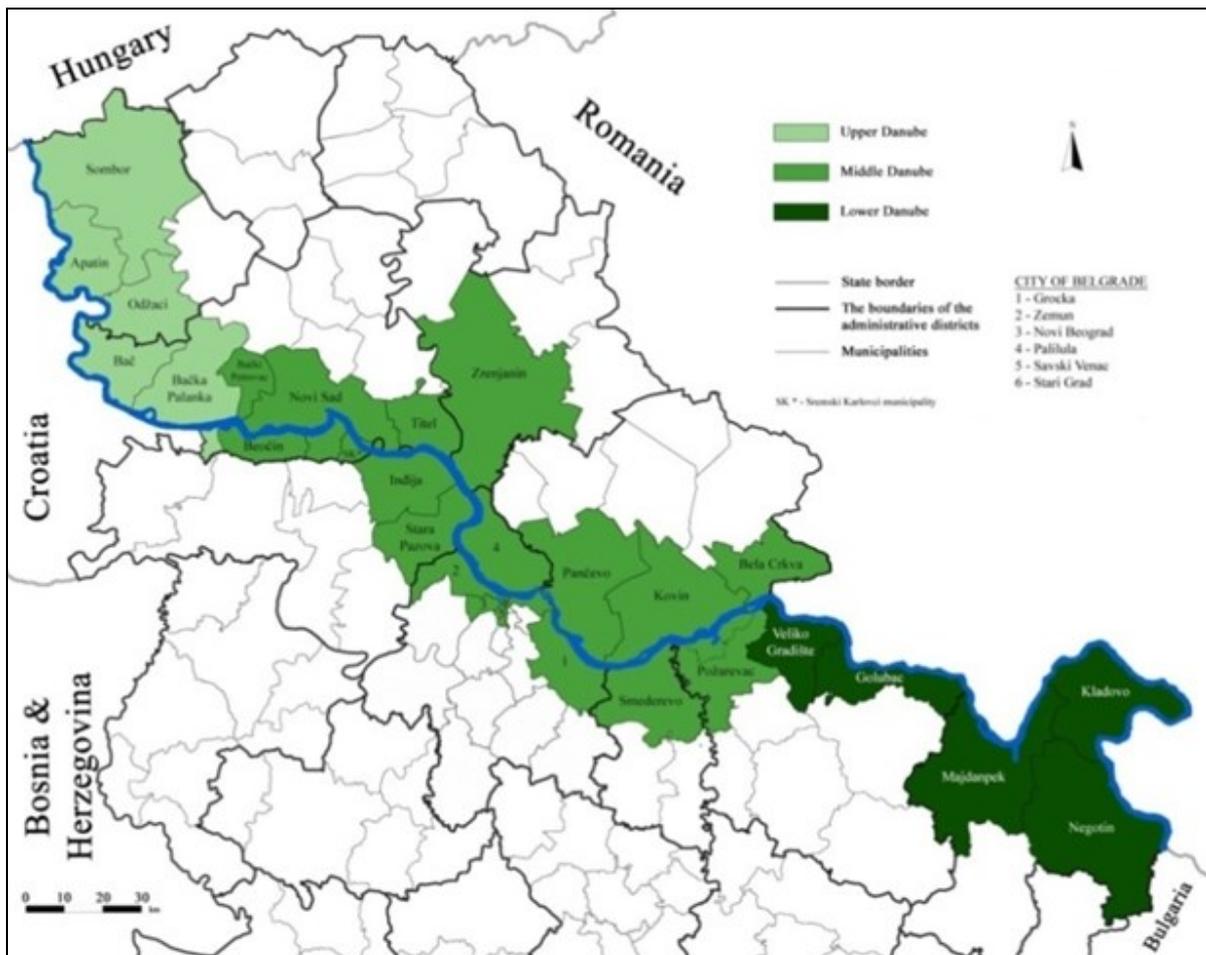


Fig. 1 – Division of the Danube Region in the Republic of Serbia (Milanković, 2015, modified by the author).

This sectoral division is the best solution, it contributing to better analyse and study all three zones that had experienced a different development throughout history, the consequences left could explain the different degrees of both urban and overall development of each of them. The middle Danube sector covers the largest area (53.2%), the lower one and the upper sectors 24.9% and 21.9%, respectively, of the total Danube Region in Serbia. The distribution of population also differs, so 10.6% live in the upper Danube sector, 84.4% in the middle Danube sector and only 5.0% of the total population of the Danube Region live in the Lower Danube sector (Fig. 2). This confirms that the middle part of the Danube flow in Serbia is the most populous and most populated area, with two large agglomerations: the City of Belgrade and the City of Novi Sad. However, besides its peripheral position and threatening depopulation, the Lower Danube sector has numerous development possibilities in agriculture.

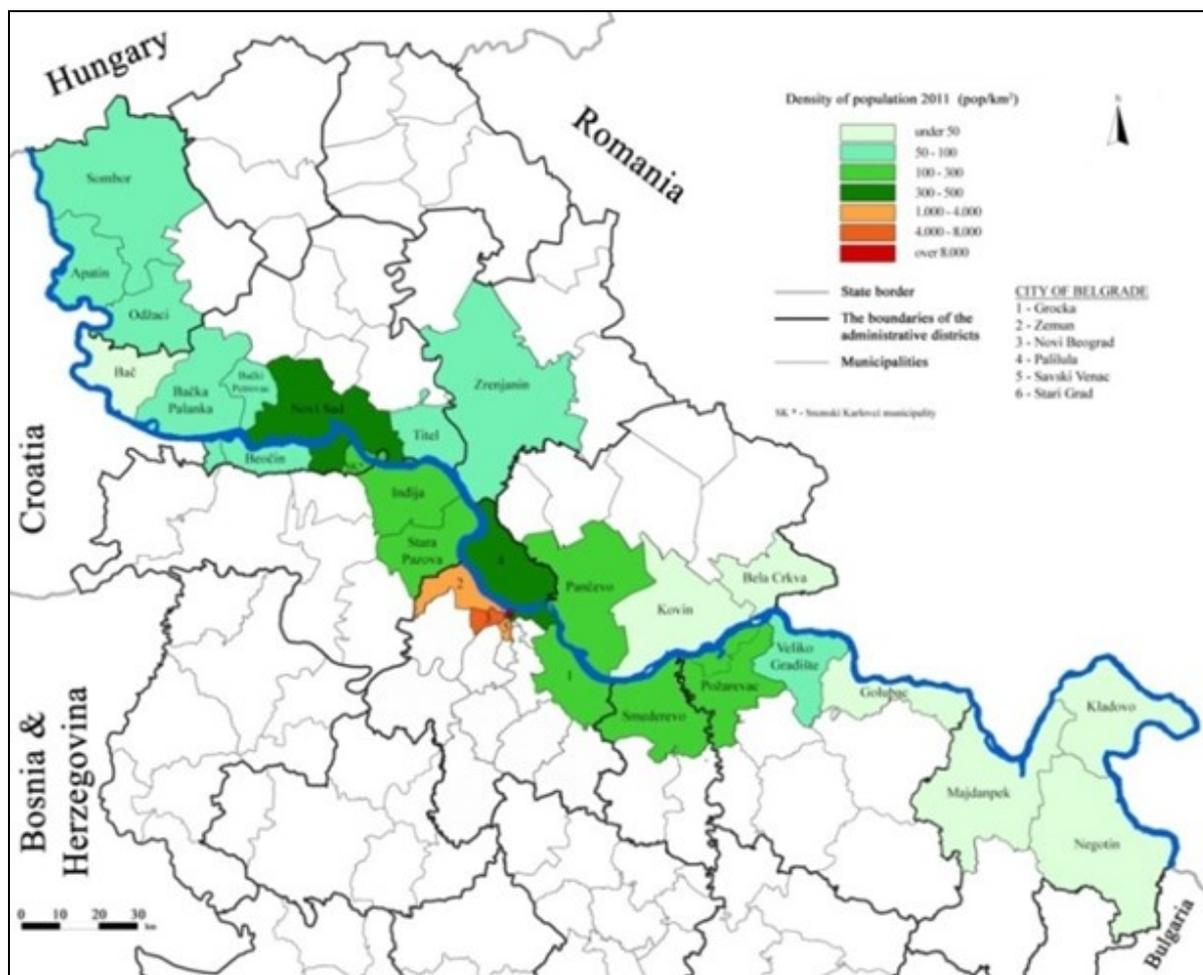


Fig. 2 – Population density (pop./km<sup>2</sup>) in the Danube Region in the Republic of Serbia (Milanković, 2015, modified by the author).

First of all, it highlights the hydroelectric potential, then the mineral resources, as well as the possibilities of the development of agricultural production, food and processing industry. Investing in the navigation infrastructure would contribute to the development of nautical and other types of tourism in this area, as an important segment of economic development.

The natural and social characteristics of this area made it peripheral in relation to the rest of the Danube Region, but quite specific in many ways. This area has many development potentials, but also a number of constraints that make this part of the Danube Region currently underdeveloped. The area of the Lower Danube sector covers 24.9% of the total area of the Danube Region in the Republic of Serbia, while only 5% of the total population of the region lives here.

Despite the constant decline in the number of inhabitants in this area (Fig. 3), some demographic potential has a relatively large share of the economically active population (Golubac, Veliko Gradište) which can be engaged in agriculture, tourism, etc.

Also, this area has a large number of residents, working temporarily abroad, who could invest their capital here. The main limitation in further development is stagnation of population and depopulation, as well as an expected continual aging trend and decrease of the young population.

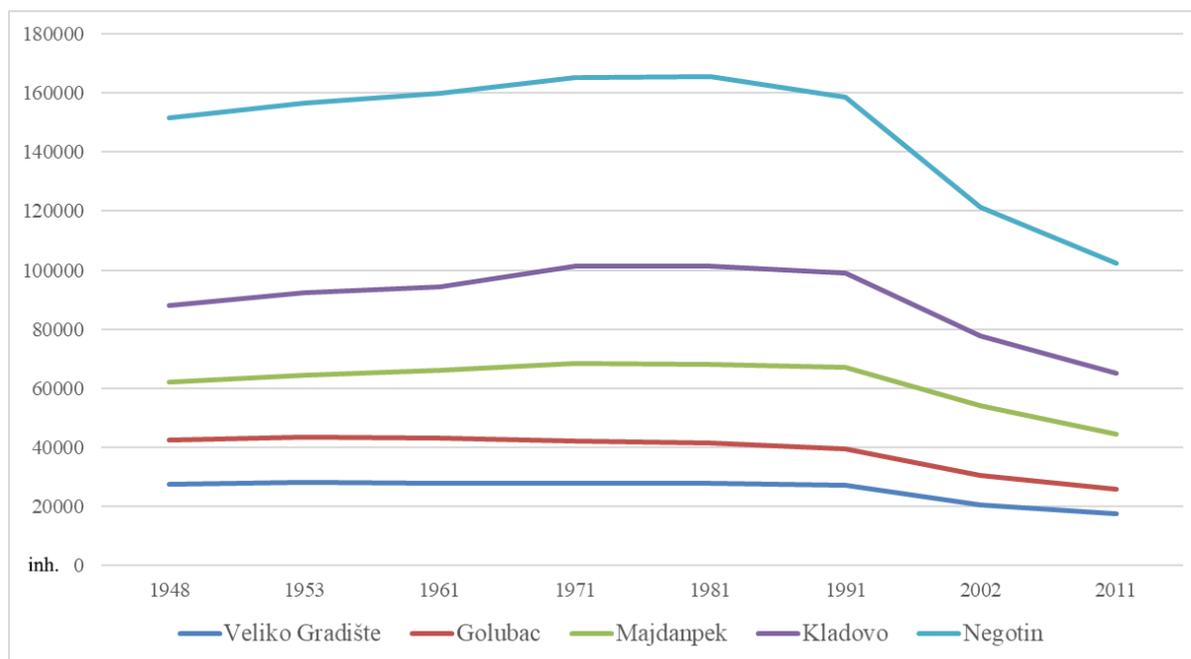


Fig. 3 – Changes in the number of inhabitants in the municipalities of the Lower Danube (1948–2011).

This area stands out by the migration of people to major cities or abroad, which has actually “emptied” the village, especially in parts of the Bor District. The greatest potential for the development of settlements has the position of Corridor VII, followed by a relatively reasonable concentration of population and economic activities in the centers and settlements. A development limitation is the insufficiently valued position between Corridors X and IV, while the basic absence of a balanced spatial-functional development of the settlement network in this area is the concentration of population, economic activities and public-sector infrastructure in regional and sub-regional centers and suburban settlements, on the one hand, and demographic fragmentation, depopulation, traffic isolation, underdeveloped activity structure and inadequate public-sector infrastructure in the villages of mountainous and peripheral areas, on the other. A poor road infrastructure and little accessibility, as well as the absence of a railway network are particularly visible in the municipalities of Majdanpek, Kladovo and Negotin. That is the reason why the position of these municipalities is out of the main traffic corridors, or they are inadequately connected. Uneven spatial distribution is characteristic of the municipality of Majdanpek, since the central part of the municipality is completely uninhabited. This indicates an even more conspicuous trend of demographic fragmentation, which in general, is a major problem in the municipalities of eastern Serbia. The municipalities of the Lower Danube sector were included in Euroregion 21, as a form of cross-border cooperation with Romania and Bulgaria. In the territory of this Euroregion, the Danube plays an important part in matters of transport, economy and political life, as well as in tourism, all with the aim of promoting the border regions of these three countries (Petrović, 2009). Although the Danube countries have different priorities, the cross-border cooperation areas will play an important role in strengthening the territorial cohesion, and the Danube Region strategy should be seen as a working method to increase efficiency and results (Tache, Popescu & Petrișor, 2014).

### 3.1. Hydroenergy and mineral resources as a developing potential of the Lower Danube sector

With its average flow of over 5,350 m<sup>3</sup>, the Danube represents about 42% of Serbia's hydro-energy potential, having two hydroelectric power-plants in the area of the Lower Danube sector, HPP "Djerdap I", total power 1,026 MW, still the largest hydro-technical structure on the Danube, and HPP "Djerdap II", with a total capacity of 270 MW.

The possibilities for the further development of the mentioned hydroelectric power-plants have been exhausted, so further development and increase of the exploitation of the Danube potential can be achieved in the following way (proposal made in the *Spatial Plan of special purpose area – international waterway E-80 – Danube* (Pan-European Corridor VII):

1. Another potential area is located on a part of the Danube flow downstream of the HPP "Djerdap II" to the mouth of the Timok and can be used within the "Turnu Magurele – Nikopol" HPP. This would allow for an industry that uses large quantities of technological water to be located in this area.
2. The development of the RHE "Djerdap III", about 3 km upstream Lepenski Vir, on the slopes of the North Kucaj, is another opportunity considered to increase the exploitation of the Danube potential. It is a technologically possible, but extremely expensive target, for which a preliminary feasibility study is needed.

Observing the mineral resources in the Lower Danube sector, the "Timok eruptive zone" has a long tradition in the exploitation and processing of metal raw materials, the most important copper deposits lying in the regions of Bor and Majdanpek, as well as gold, silver and tungsten near Blagojev Kamen. Deposits of gold and silver also exist in the area of the Pek and Timok Rivers and in the area of the Deli Jovan Mountain. Part of known deposits is exhausted, while part is exploited in underground mines, but there is a prospect to restart production in temporarily closed ore deposits and find and open up new ones. Progress in the exploitation and processing technology contributes to it and allows the use of ores with a small content of useful components, so that the material from the old tip heads can also be used for the economic production of metals (*Mineral Resources Management Strategy of the Republic of Serbia by 2030*).

### 3.2. Agriculture as developing potential of the Lower Danube sector

**Potentials** for the development of agriculture in the Lower Danube sector are primarily found in the heterogeneity of the microclimate, pedological, hydrographic and other natural conditions, which enables using certain areas to offer a wide range of quality agro-food products and relatively large areas of fertile soils, without major restrictions on environmentally safe irrigation.

Based on the data yielded by the Agricultural Census (2013), made on the territory of the Republic of Serbia, the area of the Lower Danube sector is seen as being excellent fruit-and-vineyard land. This gives it the opportunity to advance in the production of grapes and wines, as well as in various continental fruit, especially old autochthonous varieties. The potential is also reflected in the larger area of meadows and natural meadows that provide the possibility for developing livestock. The Lower Danube sector is also favourable to the cultivation of medicinal and aromatic herbs, as well as to the development of beekeeping (the area of the municipalities of Majdanpek, Negotin and Kladovo), where agricultural and forest areas can be combined in an integrated management system. The Bor District area has the best possibilities for collecting forest fruit. The development of agriculture may contribute to a possible significant return of young people from abroad.

It is especially important to preserve and activate the forest potential of this area by providing support for the sustainable exploitation of forest products (primarily wood) with the development of the wood processing industry; the use of forests for scientific-research, educational, sports and recreational, hunting and other activities. This is one of the best wooded areas in Serbia, and certainly the most wooded one in the Danube Region, which is its basic potential. Also, the best use of forests for tourism in protected natural areas would be welcome. We should not ignore the importance of the biomass in recent years as a source of renewable energy in developed countries (Milanković, 2015). The area also has good opportunities for the development of fishing and good fishing conditions, as well as a significant potential of the hunting and fishing tourism offer (Milanković, 2015).

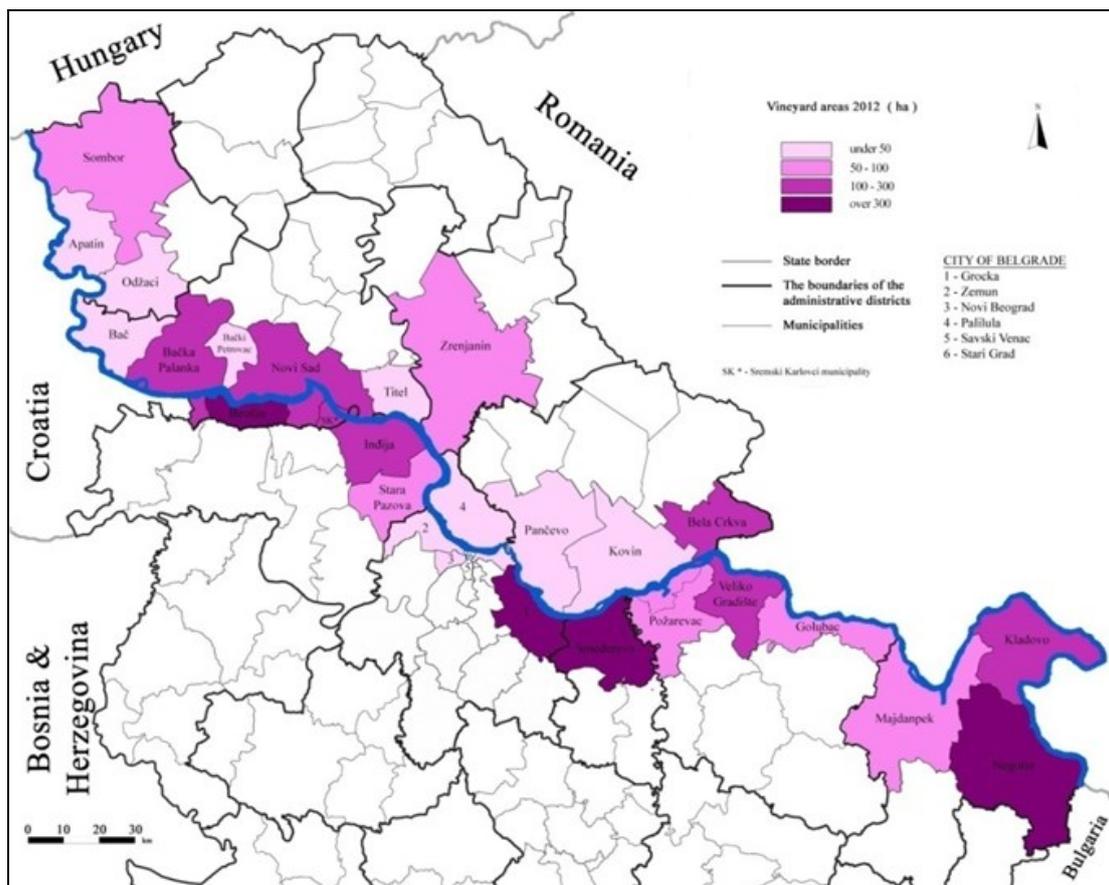


Fig. 4 – Vineyard areas, 2012 (ha), in the Danube Region of the Republic of Serbia (Milanković, 2015, modified by the author).

The basic **restrictions** for the development of agriculture are the unfavourable age and educational structure of the agricultural population, fragmented land ownership of family farms and the poverty of the rural population in households with exclusively agricultural sources of income. This is coupled with a relatively high percentage of hilly and mountainous areas in which soil and climatic conditions are considerably unfavourable for a cost-effective agricultural production, as well as huge cross-border environmental pollution of some parts of Kladovo municipality from the emission of harmful substances in the air and river coming from Romania. The poor development of transport, hydro-technical, social and other rural infrastructure, especially in mountainous areas, is another limitation to the development of agriculture in the Lower Danube sector. The poor health of forests,

extensively subjected to drying in almost the entire area of the Djerdap National Park, is mentioned in the Spatial Plan of the “Djerdap” National Park. The limitation in the development of forestry, hunting and fishing is the result of the absence of a hunting development strategy, but also of little knowledge on the state of private forests (Milanković, 2015).

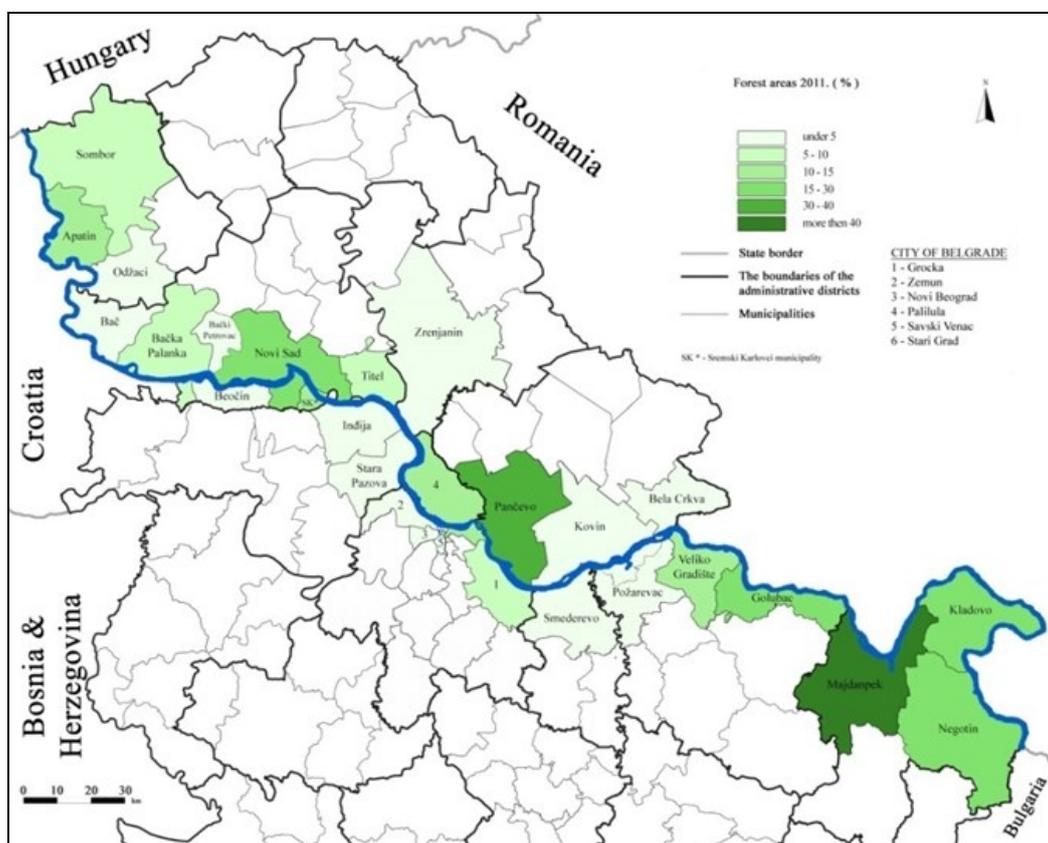


Fig. 5 – Forest areas, 2012 (ha), in the Danube Region of the Republic of Serbia (Milanković, 2015, modified by the author).

### 3.3. Tourism as developing potential of the Lower Danube sector

The **potential** for the development of tourism is represented by the natural and cultural values of this area, which make the Lower Danube sector an extremely important *historically-ecological tourist zone*. The basic potential for the development of tourism is based on the favourable geo-traffic position on the Danube River, the main routes which connect Corridor X and other main roads that provide access to areas for ambient and panoramic tours (ancient and other cultural heritage sites). A number of 12 bridges have already been built on the Danube in Serbia and 5 are planned to be built. The Republic of Serbia has 9 Danubian ports of international importance. The wealth of the cultural heritage in this area (archaeological sites, Roman culture, fortresses, etc.) have turned the Lower Danube sector into a distinct “historical zone” in the tourist offer. Also of interest are the two national parks, Fruška Gora and Djerdap, located on the right bank of the Danube in Serbia (Dragičević *et al.*, 2013). What is particular about the Lower Danube sector are the “Djerdap” National Park and the Djerdap Gorges which provide opportunities for the development of various types of tourism (nautical, eco-tourism, fishing, educational, etc.). This area has numerous possibilities of connecting attractions

on the coast with those in the immediate surroundings of the Danube. This type of tourist valorization requires the revitalization of existing ports and marinas, as well as the construction of planned ones, thus connecting attractive areas with the Danube River (Hadžić *et al.*, 2005; Dragin *et al.*, 2010).

The municipality of Majdanpek (Donji Milanovac and Lepenski Vir) has currently good opportunities for using the Danube waterway in tourism, as well as Kladovo (Tekija towage), while in the Golubac and Veliko Gradiste area they have planned passenger ports and marinas. A special potential for developing rural tourism exists in the Negotinska Krajina and the municipality of Majdanpek areas. Tourism can also target local agriculture, crafts, domestic work, etc., as well as the cross-border areas.

One of the basic **limitations** in the development of Lower Danube tourism is insufficient utilization of its capacities during the year, inadequate tourism product and poor marketing, as well as a shortage of quality accommodation capacities. What obviously prevents the development of tourism is a poor road, river-nautical, communal and tourist infrastructure, an unfavourable demographic picture, as well as the absence of regulation of the greater part of road and waterway facilities for the need of tourists. Other restrictions are represented by the insufficient and inadequate protection of the natural environment (National Park “Djerdap”), seen above all in landfills along the roads, unmanaged area by the river, etc. Some of the limitations of the tourist offer at national level are the insufficiently defined competences for managing sustainable tourism development in protected areas, as well as insufficient state funds for financing capital infrastructure, developing a tourism and recreational infrastructure, etc. The administrative procedure of ship registration with the port authorities and the obligation to announce the route of the vessel and the time limits is also a form of restriction (transition to Romania).

#### **3.4. Infrastructure as developing potential of the Lower Danube sector**

The importance of infrastructure for the development of a particular region is obvious, because the transport network has the effect of joining and permeation, integration and organization representing a significant factor in the formation of central regions and axes of development, it (Grčić, Ratkaj, 2003). The greatest **potential** for traffic development is the intermodal conception of infrastructure systems based on road, rail, river and air transport. The boundary between part of this area and the EU countries and between Corridors IV, VII and X affords intensive development of transit traffic. There is a relatively good road traffic network density and accessibility to settlements, as well as the future construction of the Nis to Djerdap II highway and the affirmation of the European bicycle corridor Eurovelo 6 are worth mentioning. According to Vujko and Gajić (2014) the Danube Cycling Route has primarily the role of the economic development of Danubian countries. The possibility of overhauling and modernizing railroads in this area is particularly justified because it would offer environmental protection and low transport prices, as well as the possibility to connect “Prahovo” port with Romania through the “Djerdap II” dam, which would be of international importance for the railway. Also, modernization of the airport in Bor would contribute to increasing traffic accessibility to these parts of Serbia and provide opportunities for using it for tourist and other purposes, too. The main potential of this area in terms of sustainable use of the waterway is certainly the Danube River – waterway class VII in this area, while class VIc (Fig. 6) should be provided downstream Prahovo (European Conference of Ministers of Transport, 1992).

The waterway can be connected with the most developed industrial centers in Europe, “Prahovo” port playing a particular role, while the ports in Donji Milanovac, Tekija, Kladovo and Lepenski Vir have primarily the function of accepting tourism passenger ships (except for the harbours in Kladovo-Shipyard, used also for freight traffic, yet without a sufficient capacity for overloading devices).

Developing the waterway and investing in it is of great importance for the Republic of Serbia, as Mihić *et al.* (2011) emphasize – the development of inland waterway transport is one of the EU long-term sustainable development priorities.

The basic **constraint** in the sustainable development of traffic in this area is the poor condition of the local network of roads, as well as the unfinished and incomplete first-order road and railway sections. Also, the shortcomings of traffic are obsolescence and the insufficient equipment of port capacities and airport infrastructure. In addition, the relief of this area also influences landsliding, thus preventing the river from crossing the Djerdap Gorge, the area becoming quite unsuitable for the development and construction of communication lines. An important limitation in the exploitation of the Danube waterway are the submerged warships downstream Prahovo, which at low water levels prevent and reduce navigation safety in this area. Due to changing morphometric indicators, accessibility in the Djerdap area is limited, and some narrow sections in the cluster create difficulties to navigation.

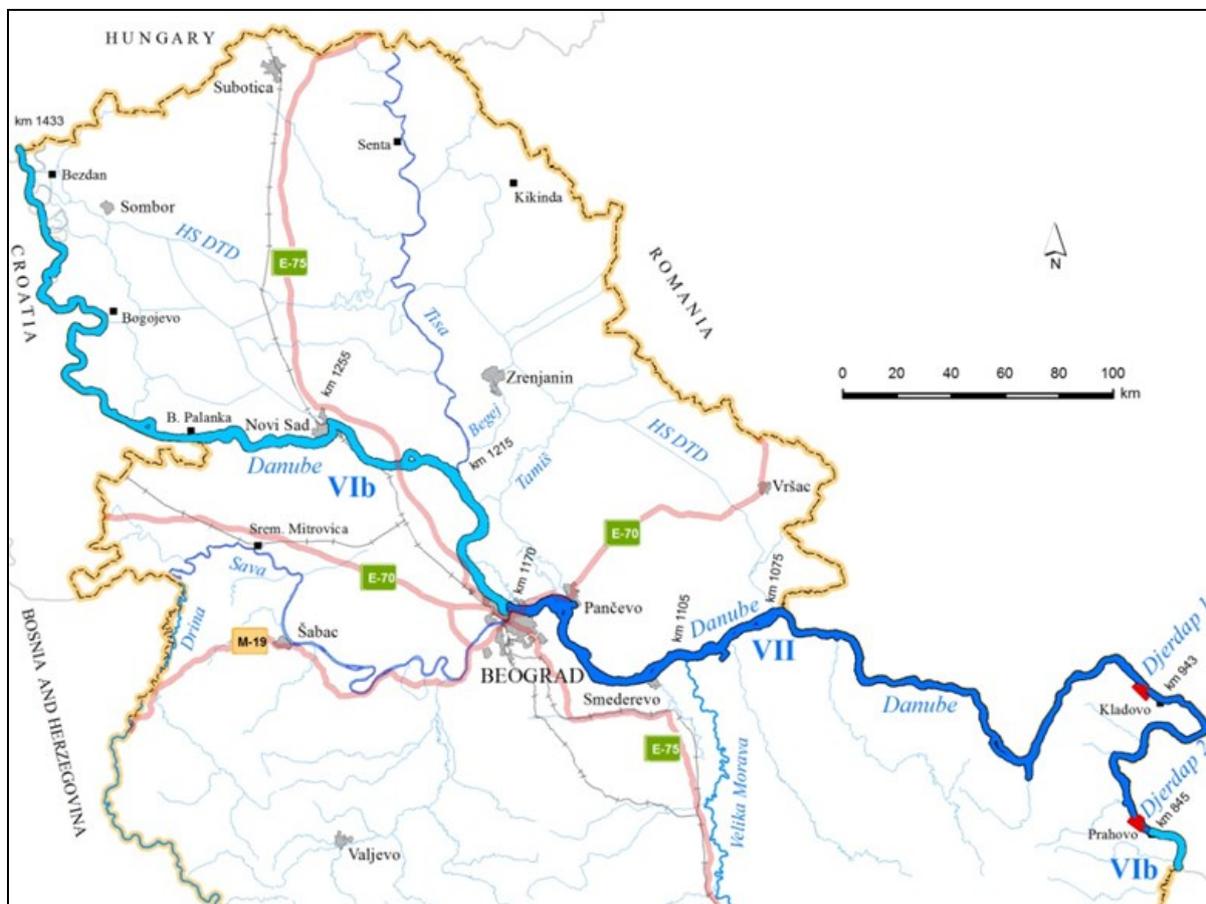


Fig. 6 – The Danube River in Serbia (Corridor VII) (Base map: Global map V2 <http://www.iscgm.org/gmd/>).

### 3.5. The SWOT analysis

Based on the possibilities and constraints in the economic development of the Lower Danube sector, a SWOT analysis can be performed (Table 1).

Table 1

A SWOT analysis for the Lower Danube sector in the Republic of Serbia

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Good geographical position on Corridor VII;</li> <li>• The advantage of the waterway in relation to other types of traffic;</li> <li>• The existence of conditions for the development of intermodal traffic (Prahovo port);</li> <li>• Hydroelectric potential of the Danube River;</li> <li>• Hydropower plants “Djerdap I and II” which contributed to safer navigation;</li> <li>• Mineral and forest resources;</li> <li>• Perfect conditions for the development of wine and fruit growing;</li> <li>• Tourist potentials, natural and cultural heritage;</li> <li>• Relatively good accessibility to tourist destinations;</li> <li>• Extremely favourable state of the environment in protected areas;</li> <li>• Improved water quality of the Danube River;</li> <li>• The participation of Serbia in numerous projects that promote the development of the Danube Region;</li> <li>• Reconstruction of hydroelectric power-plants and building a new Hydropower plant, ‘Djerdap III’, in co-operation with Romania.</li> </ul>	<ul style="list-style-type: none"> <li>• Insufficient utilization of the advantages of the Danube waterway (especially in terms of traffic and tourism);</li> <li>• Waste water problem;</li> <li>• Insufficiently built infrastructure, especially toward international corridors;</li> <li>• Difficult port infrastructure;</li> <li>• Old technology, drop in investments and transition recession;</li> <li>• Depopulation and unfavourable educational structure;</li> <li>• Fragmentation of two-member households and single-family households;</li> <li>• Incomplete tourist presentation of the natural and cultural heritage;</li> <li>• Poor use of renewable energy sources (geothermal, wind and solar energy);</li> <li>• Environmental problems (wastewater from agriculture and industry, pollution induced exploitation of mineral resources, erosion, cross-border pollution, etc.);</li> <li>• Bottlenecks on the waterway and sunken ships which affect navigation safety.</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Significant use of water transport and improvement of the position of waterways;</li> <li>• The possibility of developing multimodal traffic;</li> <li>• Interests of the countries in the region for the development of a regional transport network;</li> <li>• Possibility of connecting these areas with Corridor IV;</li> <li>• The development of a hydro-melioration system as a positive effect on the region’s agriculture;</li> <li>• The ability of clearly defining the wine region and its involvement in the tourist offer;</li> <li>• The importance of the diaspora and potential returnees from abroad (transfer of knowledge and technology, etc.);</li> <li>• The possibility of linking tourism potentials with cross-border areas;</li> <li>• The possibility of integrating the cultural and natural heritage (History and ecological zone in tourism);</li> <li>• Exploitation of renewable energy sources;</li> <li>• Improving the quality of the environment by using EU funds;</li> <li>• Better transnational and cross-border cooperation with the Danube countries (Romania, Bulgaria).</li> </ul>	<ul style="list-style-type: none"> <li>• Continued degradation of parts of the land infrastructure;</li> <li>• Outdated technology, a big polluter of the environment;</li> <li>• The population aging trend, especially in the rural areas;</li> <li>• Uneven spatial distribution of the population and concentration in the district of the macro-regional center;</li> <li>• Decrease in the number of inhabitants, fragmentation of the households and displacement of rural settlements;</li> <li>• Disproportion in the level of development of regional centers;</li> <li>• Absence of continuous investment in tourism, absence of accommodation capacities and poor quality presentation of the natural and cultural heritage;</li> <li>• Cross-border pollution and weaknesses in the implementation of regulations in protecting natural resources and the environment;</li> <li>• Insufficient protection, conservation and restoration of the cultural heritage.</li> </ul>

#### 4. CONCLUSION

The main potential of economic development in the Lower Danube sector is primarily its hydropower (existing hydroelectric power-plants), the reserves of precious metals, mineral raw materials, copper ore, zinc and lead, stone, gravel and sand. In addition, there are the natural resources for the development of agriculture and the food industry, as well as natural values and conditions for the development of certain types of tourism (mountain, nautical, hunting, eco). This area has a significant land potential, but economic and tax policy measures require the formation of larger agricultural holdings (over 100 ha), with an adequate irrigation system and optimum application of an agro-technology. Despite the potentials that contribute to the development of this part of the Danube Region, there are numerous limitations, such as the poor economic situation and the economic crisis, a high unemployment rate, unfavourable demographic structure, low level of investment and equipment.

Characteristic of the Lower Danube sector which is not economically developed, is the 'brain drain' and shortage of quality personnel, an insufficiently built and developed infrastructure, especially towards the international corridors. Slow economic development is caused by the irrational use of space, high costs of activating existing industrial brownfield sites, as well as lack of financial resources and adverse financing conditions.

From the above one may conclude that the main potentials of economic development in the Lower Danube sector are primarily hydropower and the existing hydroelectric power-plants, the reserves of precious metals, mineral raw materials, copper ore, zinc and lead, stone, gravel and sand. In addition, there are the natural resources for the development of agriculture and the food industry, as well as natural assets and conditions for the development of certain types of tourism (mountain, nautical, hunting, eco). The Lower Danube sector has many development potentials, but also many constraints which prevent the development of this region in the Republic of Serbia.

The basic demographic constraint in the development of the Lower Danube sector is depopulation, the unfavourable educational structure and the fragmentation of households. Unfortunately, the population aging trend, the decrease in the number of inhabitants, the fragmentation of households and the displacement of rural settlements will continue.

Also, there are infrastructural problems, such as the poor quality of roads and the insufficiently built infrastructure, especially in mountain areas. Great problems on the waterway pose the sunken ships which affect navigation safety.

Despite numerous problems, this region has many opportunities, such as the possibility of connecting this area with Corridor IV and developing multimodal traffic. This part of Serbia has many opportunities for developing tourism and linking it with cross-border areas. The main disadvantage for the development of tourism is the absence of steady investment, of accommodation capacities and the poor qualitative presentation of the natural and cultural heritage.

This region is well-known for its environmental problems and waste water, because of old technology and shortage of investments. A big challenge in sustainable development is cross-border pollution and weaknesses in implementing regulations of protecting natural resources and the environment. The quality of the environment, as well as other segments of development of this area can be improved by using EU funds and better transnational and cross-border cooperation with the Danubian countries (Romania, Bulgaria).

**Acknowledgments.** This research was supported by the Project 114-451-2465/2018-02 of the Provincial Secretariat for Science and Technological Development, ECAP Vojvodina and by Project 176020 of the Serbian Ministry of Education, Science and Technological Development.

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Received February 2, 2018

