

Review paper

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THE DANUBE AS A DEVELOPMENT RESOURCE - PERCEPTION AND ACTIVITIES OF LOCAL ADMINISTRATION

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Abstract: The paper presents the results of multidisciplinary studies that were reached during the interviews in the local administrations in 24 cities and municipalities through which the river Danube flows on the territory of the Republic of Serbia. The Danube is an extraordinary resource that links the North and the Black Sea through the Rhine-Main-Danube Canal, and flows through 13 European countries. There are almost 3 million inhabitants on its banks in Serbia, and it is also the region with the largest economic activity in the territory of the Republic of Serbia. Local administrations took responsibility for their own development by making a series of strategic documents related to local economic development in which they analyzed the current situation and predicted development measures and incentives to improve the investment environment. In this paper we analyze the eco-chemical characteristics of water, arrangements of banks and riverbed, supporting infrastructure, business infrastructure, development measures and incentives, as well as cooperation with other local communities in the Danube region. The aim of this study was to determine awareness, knowledge and commitment of decision-making capabilities of local communities on the Danube as a development resource, especially in the context of the modern concept of sustainable development.

Keywords: Danube, water resource development, sustainable development

Introduction

Danube is important for the development of European civilization and Serbian culture for a long time. In the period from 7000 to 5500 BC one of the first cultures on the territory of Serbia upraised on its banks, on Đerdapska klisura and the site called Lepenski vir. Even today, Danube has an extraordinary role not just as a river that connects peoples and cultures, but also as a source of water, which is increasingly shortfall global resource. It is estimated that the total amount of water on Earth is 1370 million km³, and only 47 million km³ or 3% is fresh water. From the total amount of fresh water, 68,7% is in the form of ice (at the poles and glaciers), 30,1% in the soil, and only 0,3% is surface water.

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2% of surface water is in the form of rivers, 11% in the form of swamps and 87% in the form of lakes. It is estimated that only 12000 km³ of this quantity is covered with stable water management (U.S, Geological Survey, 2010). When we are considering the data on water resources in the context of the population on the planet, we can conclude that today there is available about 7700 m³ of water per capita per year. This amount declines steadily because the population on Earth is growing. The United Nations believes that as much as 67% of the world population could be affected with the so called “water shock” by 2025 (Gray & Sadoff, 2006). In addition to its lack, the water it is also used irrationally (out of 4130 km³ of gripped water, 2.360 km³ was used in 1990, and out of 5200 km³ gripped water, 2900 km³ was used in 2000). In the last 50 years, the use of water in agriculture increased 60%, in industry 22% and in households 18%. Most of the water is spent in the industry 59%, in agriculture 30% and 11% in households. The lack of water has become a limiting factor for the development in many countries, and according to the World Health Organization (WHO) in 2000, 1.1 billion people were without access to safe drinking water, out of which 63% in Asia, 28% in Africa, 7% in Latin America and 2% in Europe. The criterion was that the inhabitants do not walk more than 15 minutes from the place of residence to place where they can drink water.

Europe has a relatively small amount of available water – only 4.600 m³ per capita. Therefore, we can expect that more attention will be focused on the Danube in future, as on an important European river. The Danube is 2888 km long, out of which 588 km belongs to Serbia. The Danube basin covers an area of 817000 km², and 10,3% of the basin is in Serbia. The Danube enters Serbia at a flow rate of 2.500 m³/s, and goes out from Serbia with an average flow rate of 5500 m³/s. Only in Serbia this river receives the force and power from powerful tributaries – Sava, Tisa, Morava and Timok. 2932545 people live on the banks of the Danube in Serbia, or 40% of the population of Serbia (according to the 2002 census). The largest cities in Serbia are in Danube region (in so called Podunavlje), with an economy that is considerably more developed than in other Serbian regions. The capacity of the sources of drinking water in Serbia is 964 million m³ per year on 753,5 million m³ per year measured. Irrigation is carried out with 276 systems on an area of 182252 ha. Industrial water consumption in Serbia is 613 million m³ per year, out of which 340 million m³ per year goes to Central Serbia, 183 million m³ per year goes to Autonomous Province of Vojvodina, and 90 million m³ per year goes to Autonomous Province of Kosovo and Metohija. The highest water consumption is in the chemical industry (116,3 million m³ per year), in paper production and processing (50,6 million m³ per year), and in processing of ferrous metals (25,8 million m³/year) (Živadinović, 2011).

Although Serbia has no bigger problems with water, we need to manage this precious resource with more attention. Danube, as a important water capacity of Serbia is also an important strategic resource, and the Danube should be the base of the economic development of the Danube region. In order to use this strategic opportunities of Danube, the government, local communities and businesses firms need to become aware of its importance first, and then to work on programs of development that would lead Serbia towards a prosperous future. The importance of the Danube as a development resource of Serbia is particularly emphasized when viewed through the prism of sustainable development. Sustainable development seeks to establish a harmonious relationship between people, companies, communities, society and the planet Earth. This concept goes beyond the earlier division to macro and micro economy. Sustainable development is based on the synergy of all elements of the complex system of the society, nature and economy. The main motto of sustainable economy – *Doing well by doing good* is based on beliefs and thinking, which determine the type of management that makes economy, environment and social structure function.

This paper discusses the Danube, as a development resource of Serbia, with a focus on strategic goals and plans of local communities. We want to prove that responsible executives are not paying enough attention to the potential of the Danube and that there is untapped capacity for development.

Overview of literature and hypotheses

One of the most important documents based on the concept of sustainable economic development is *Vision 2050: The new agenda for business* issued by the World Business Council for Sustainable Development (WBCSD, 2010). The document represents a platform for dialogue and call for a collective action. The starting position in the preparation of the document was that the environment was radically changed, and that this situation requires new redefinition of economics and business. The capacity of the Earth could not support the current concept of development. It is necessary to harmonize the economic activities and environmental limits. Developed countries, in relation to the UNDP Human Development Index (United Nations Development Programme's – UNDP, Human Development Index – HDI) and the global ecological space (Global Footprint Network's Ecological Footprint) do not have great potential for further development, because they are ecologically limited, and their demands for environmental capacity significantly exceed the world average. On the other hand, underdeveloped countries could greatly develop, but they cannot because they are poor. Collective action should harmonize the development and enable a

normal life to all mankind. The authors believe that it is possible to achieve a sustainable future. Applying the new concept of development and operations can get to the point where the economy and quality of life grow, while their impact on the environment declines.

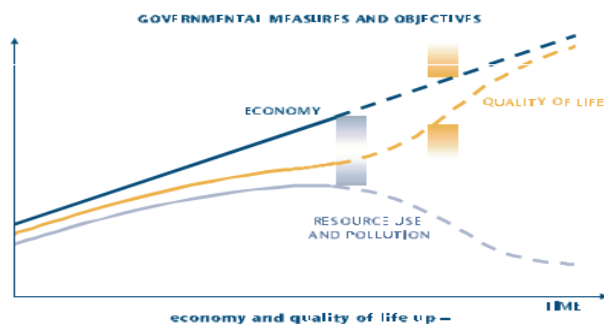


Figure 1. Economy, quality of life and resources
Source: WBCSD, Eco-efficiency, 22 January 2010, (p. 62)

Since most of the world's economic activities are realized through companies, it is considered that they have the biggest responsibility for implementation of the new concept of economics and business. The European Union has tried to find solutions to these issues in the document called *A European strategy for smart, sustainable and inclusive growth EUROPE 2020* (EU, 2010). Following this platform, the Republic of Serbia has responded with the *National Sustainable Development Strategy and Action Plan for implementing the National Strategy for Sustainable Development of the Republic of Serbia* (VRS, 2008). The most important elements of these strategies are incorporated in the *Strategy for Local and Economic Development of Municipalities Bač, Golubac, Sombor, Zrenjanin, Novi Sad, Bačka Palanka, Majdanpek Negotin, Inđija, Sremski Karlovci, Kladovo, Kovin and Belgrade*. However, the platform called *Vision 2050* indicates a complex way of achieving a sustainable future. They found that the nine tracks, which are mutually collided, with lots of intermediate and transitional goals before achievement of the goal – a normal life and reservation of the nature. A normal life means here that people have food, water, energy, housing, consumer goods, and access to education, treatment and traveling without further destroying the climate, environment and other parts of the ecosystem. These nine tracks are: human values, development of humanity, economy, agriculture, forests, energy, construction, mobility and raw materials. The first track, the development of values, is very close to the mentioned requirements and developments of the values in social groups. Apart from the companies, the government also has an irreplaceable role in directing development towards sustainable development. Studies showed a positive

impact of macro regulation of the environment. The countries with most powerful regulations achieve the best results and greater competitiveness. The claims that investors invest in the markets where the environment is not regulated are also shattered. Cooperation between companies, administrations and society is very important in implementation of sustainability. Many companies have found a balance between profit, planet and people (so called 3P's) today. Reaching a sustainable society and sustainable economy requires a creativity that would be supported by scientific, technological and sociological research. Innovation is a necessary condition for a sustainable economy, not just for surviving of the economy, but for also for greater benefits. Innovation is essential for all industries and for all types of companies – small, medium and large. Successful innovation can only be a result of cooperation between government, companies and knowledge institutions. According to the previously determined conceptual framework, there are few hypotheses set in this work.

The general hypothesis is that the Danube is significant water potential of Serbia, which is not sufficiently utilized.

If the general hypothesis is correct, and having in mind the previously expressed statements that an essentially different concept of companies, society and nature is needed, we can set the following hypothesis

Successful development requires collective action of local communities and companies in order to use the potential of the Danube based on the concept of sustainable development.

Subject, aim and research methods

The subject and aim of this research are defined on the basis of the initial hypothesis that the development potential of the Danube is not enough used in Serbia. Many macroeconomic data on the demographic and economic position on local, regional and national level were available to the researchers. Numerous analyses of available data from secondary sources indicated that there was a great developmental advantage of local administrations that are located in the Danube region compared to the rest of Serbia. The results of these studies have also indicated the conclusion that the main reason for this overall advantage is not the Danube itself as a resource.

The views of today's decision makers on the local level (mayors and chairmen) on the development potential of the Danube is the subject of this research, and it arises from the need for better understanding and causal interpretation of general socio-economic indicators of development.

The aim of this research is to get a general picture on the meaning of today's Danube local management, and how much the local development priorities rely on the Danube as a remarkable advantage. Likewise, the aims of this research are the answers that are lacking when it comes to improving general cooperation and socio-economic development in the Danube region.

For purposes of this research, an electronic questionnaire entitled *The Danube as the Potential for Business Development* was formed. The questionnaire contains 40 questions divided into themes: eco-chemical status of the Danube, the state of the banks and riverbed, road and business infrastructure, development measures, incentives and cooperation in the Danube region. The research was realized by filling the questionnaires by the mayors and chairmen. The research involved decision-makers at the highest level in all units of local administrations (24 cities and municipalities) in the Serbian part of Danube region. Data collection lasted from 10 January to 10 March 2011, and questionnaires were distributed via electronic mail. Collected data were unified in a single database and software SPSS 17 was used for statistical analysis. Description of the collected responses and interpretations of the results of the research was focused on review of initial hypotheses and the main findings are presented in this paper.

The public opinion researchers define the hypothesis that the gross domestic product (GDP) and other general socio-economic facts are very important indicators of development, but they do not provide a complete picture of the phenomenon that is being researched. The primary research (questionnaire, etc.) is often mentioned in contemporary literature as a scientific method of great importance for the analysis of socio-economic development. (Jeremić, Vukmirović, Radojičić, & Đoković, 2011).

Questionnaire and results of research

The questionnaire was made in order to identify current and future activities of the local community, because the strategies and development plans of the companies usually do not go out public. The intention was to get an insight on future directions of local community development and development model for companies, because the new macro and cooperative management concepts in fact emphasize the need for a united action of the government and companies in a joint effort to strengthen competitiveness and innovation.

Answers to these questions are discussed and shown below.

A. Eco-chemical characteristics of water

1. Are you are familiar with the measurements results of eco-chemical parameters of the Danube?

Table 1. Answers to question A.1.

Answer	N	%
Receive regular report	3	12,5
Do not receive regular reports	21	87,5
Total	24	100

Out of 24 local administrations located on the banks of the Danube that were surveyed in total, four were declared to regularly receive reports on measurements of eco-chemical parameters, 4 have declared that they regularly receive reports on measurements of eco-chemical parameters, and even 16 are not familiar with the analysis of measurements. Two-thirds of the local administration does not use the legal right to be informed about water quality.

2. Which institutions in Serbia are responsible for monitoring and controlling water quality of the river Danube?

Table 2. Answers to the question A.2.

Answer	N	%
They know	11	45,8
They did not know	13	54,2
Total	24	100

It is indicative that more than a half of the municipalities/cities are not even familiar with the institutions responsible for monitoring and controlling water quality of the river Danube. Even 75% of local administrations have no information which institutions under their jurisdiction are responsible for communications with institutions at the republic level dealing with monitoring the quality of the river Danube. In case of an accidental situation, that may jeopardize a timely response and implementation of appropriate measures to prevent pollution. It is evident that decision-makers in local administrations generally do not receive reports, or they receive them only in emergency situations, which significantly affect the awareness of the population in these areas, and only two local administrations receive reports on control of river Danube, which are regularly delivered to the highest decision-makers in the city. No better results are obtained for the questions related to the number and

frequency of sampling, and 75% of local administrations do not know where and when sampling is performed.

3. What is the quality of Danube water in your environment?

Table 3. Answers to the question A.3.

Answer	N	%
Good	1	4,2
Within the limits of acceptable standards	14	58,3
Bad, very polluted	7	29,2
It is not known, no assessment	2	8,3
Total	24	100

In 14 municipalities/cities there is a conviction that the Danube water is of acceptable quality, in 7 they believe it is very poor, and only in one city they think the Danube water is of a good quality. It should be emphasized that our respondents “have their opinion” regarding the quality of the Danube water, although we see that the majority is not informed at all, according to the previous questions..

4. What needs to be done to keep the water in the Danube River cleaner (in the town/region)?

Table 4. Answers to the question A.4.

(The possibility of multiple responses)	N	%
The purification system for waste water	22	91,7
Cleaning solid waste off the water and shoreline	13	54,2
Monitoring, tracking, and better cooperation among Danube region municipalities	6	25,0
Raising awareness of citizens	4	16,7
Implementation of sanctions for polluters	2	8,3
Controlled use of chemicals in agriculture	1	4,2

The purification system for waste water is the most common answer to the question of the measures which should be applied so that water in the Danube becomes cleaner. More than a half of the local administrations believe that cleaning the water and shoreline could lead to improvements. Monitoring and education are next, while only two municipalities believe that the polluters should be sanctioned. Ignorance of the legislation in environmental protection is obvious, and this legislation does not look favorably on polluters.

B. Coast and riverbed

1. Does your city/municipality deal with problems which interfere with navigation on the Danube River, please specify:

Table 5. Answers to the question B.1.

Answer	N	%
Sunken ships from World War II and unexploded ordnance of a NATO bombing	1	4,2
The Danube sandbars (Pančevo, Kovin, Apatin)	3	12,5
No	20	83,3
Total	24	100

It is obvious that decision-makers are aware of the problems of navigation on the Danube. Government of the Republic of Serbia adopted the Danube Strategy, which also recognizes these problems, and the resources will be required from international financial institutions more intensively in order to solve these problems in the future.

2. To what extent erosion processes are threatening the bank of the Danube (city/municipality)?

Table 6. Answers to the question B.2.

Answer	N	%
Erosive processes are a major problem in the riverbed of the Danube (municipalities: Sombor, Indija, Zemun, Pančevo)	4	16,7
Within the limits of acceptable standards	11	45,8
There are no problems with erosive processes	4	16,7
I do not know, I have no information about it	5	20,8
Total	24	100

As in the previous issue, erosion processes have been identified in areas where they represent a serious problem. Only 20,8% of local administrations are not aware of these problems.

3. Whether and to what extent are the banks of the Danube affordable for the city/municipality?

Table 7. Answers to question B.3.

Answer	N	%
Completely inaccessible (Pančevo)	1	4,2
Partly difficult access	15	62,5
Complete access to all parts of the coast	6	25
Do not know	2	8,3
Total	24	100

Danube bank is fully accessible only in 6 municipalities; the access is difficult in 15 and completely inaccessible in one municipality, which means that 67% of municipalities can not use the development potential of the Danube because of the difficult accessibility.

C. Supporting infrastructure

1. Rate the quality and availability of existing infrastructure networks according to the needs of citizens.

Table 8. Answers to the question C.1.

	No answer	Very good	Good	Bad
Road Infrastructure	3	-	13	8
Railroad infrastructure	5	1 (Bela Crkva)	4	14
Electric distribution network	3	2 (Požarevac, Bačka Palanka)	16	3
Gas network	10	2 (Požarevac, Bačka Palanka)	10	2
ICT network	3	1 (Zrenjanin, Bačka Palanka)	18	1

The respondents rated the road infrastructure as good in 13 municipalities, while in 8 they found the situation bad. 14 municipalities are not satisfied with the railroad, while only in Bela Crkva they consider to have a very good railway infrastructure. Electricity distribution network is good in 16 and very good in 2 municipalities, which covers 75% of respondents, while only 3 municipalities expressed dissatisfaction with the electrical distribution system. Gas pipeline network satisfies 12 municipalities, other 2 think it is very good, while 10 municipalities gave no answer, which might be an indication of their dissatisfaction with the current situation. The development in Serbia is still far away from the proclaimed goals of European development goals. This is especially the case for the variables of ICT network, because 44% of the population has never used a PC (EU-27 average is 26%) and 54% has never used the Internet (Chinn & Fairlie, 2010).

2. How is your city/municipality economic development affected by the distance from the nearest airport?

Table 9. Answers to the question C.2.

Answer	N	%
Distance airport is a major constraint on economic development (Sombor, Apatin, Bač, Golubac, Negotin)	5	20,8
Partially (Sremski Karlovci, Bela Crkva, Požarevac)	3	12,5
No, this is not a big obstacle for economic development	16	66,7
Total	24	100

Only in 5 municipalities/cities they listed airport distance problem as a limiting factor in development, which is strange if we have in mind that there is only one international airport in Belgrade on the entire length of the Danube through Serbia.

D. Business infrastructure

1. Are there industrial zones, technology parks and free zones and other business infrastructure in your city/municipality? Please list the names of locations:

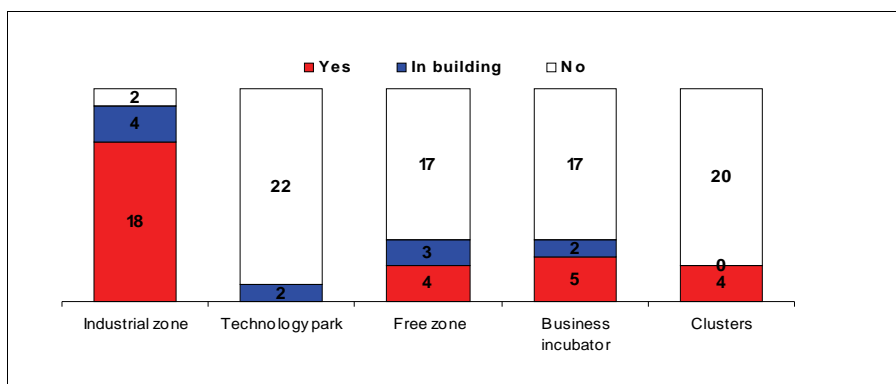


Figure 2. Answers to question D.1.

In the Danube region, there is an industrial zone in 20 municipalities/cities, in two municipalities (Bela Crkva and Majdanpek) the industrial zones are in building, and only in two municipality (Sremski Karlovci and Golubac) there is no plan for building an industrial zone. Technology parks belong to the future, because there are plans to build a technology park only in two municipalities/cities in the Danube region (Novi Sad and Indija). Free zones exist in 4 municipalities (Novi Sad, Zemun, Zrenjanin and Kladovo), and there are plans to build and develop them in 3 more municipalities/cities (Apatin, Sombor, Smederevo). The situation is similar with the business incubators, which exist in 5 (Bački Petrovac, Beočin, Zrenjanin, Novi Sad, Kladovo), in 2 (Sombor, Smederevo) are under construction, and generally absent in 17 municipalities/cities. There are four clusters in the municipality/city (Sombor, Apatin, Novi Sad, Indija). We can conclude that there are work potentials for existing and new companies in the Danube region, because the business structure offered by the local administration is evident. The use of ICT network in several regions in Serbia is on higher level than in the rest of the country. For example, the city of Belgrade and northern Serbia (Vojvodina) are significantly better on this issue than the south of Serbia. Moreover, the fact that IT Park is in building in Indija (Vojvodina) indicates that the government understands the need for ICT investment, as for a key component of economic growth (Jeremić et al., 2011).

2. How the banks of the Danube affect the development of entrepreneurship in the city/municipality?

Table 10. Answers to the question D.2.

Answer	N	%
Vicinity of the Danube is a significant advantage	8	33,3
It has advantages for certain activities: tourism, hunting, fishing, transport, agriculture	6	25
Vicinity of the Danube is generally not used	10	41,7
Total	24	100

If we consider the responses received to the question related to the extent to which the potential of the Danube is utilized in relation to other answers from this questionnaire, it appears that respondents are not really aware of the real potential of the Danube and the enormous benefits of municipalities/cities that are located in the coastal area of the Danube. Only in 8 municipalities believe that the potentials of the Danube are not used.

E. Developing policies and incentives

1. In what ways the city/municipality encourages economic development in the area of the Danube, and are there incentives for investors (taxes, fees, fiscal measures)?

Table 11. Answers to question E.1.

Municipality	In what ways the city/municipality encourages economic development in the area of the Danube, and are there incentives for investors?
Sombor	Building the industrial zones and promoting them in brochures and on the Internet. There are benefits for the purchase of land in the industrial zone in relation to the number of employees per unit of surface.
Apatin	To build the strategic locations for regionally important business. It is planned to build 160+140 ha logistics center in the region with the international port on the Danube. Business Zone – complete site is located at the free zones of Serbia, and has been identified as areas in preparation (Ministry of Finance of the Republic of Serbia, Directorate of Free Zones). This was planned and approved by the Regional Plan of RS, from 2010. Currently there are no incentives for investors by the local municipality because there are no new investments, but a set of measures is on the way.
Odžaci	Making planning documents.
Bač	The municipality is promoting the investment potential in order to attract foreign investments and implement infrastructure projects. In the industrial zone infrastructure are fully equipped with plots that are issued to investors on 80 years for use, at a cost of 0.9 €/m ² . Also, they allow a reduction of fees for land development by 50%.
Bačka Palanka	Detailed regulation plan of coast is made. Regional cooperation with other municipalities, which also rely on the Danube, is planned. There are no incentives

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	for investors by the local municipality.
Bački Petrovac	There is a project called “Danube dream” that has not been implemented yet due to lack of funds.
Beočin	Municipal Spatial plan provides new work areas near the Danube. Planning to build docks, marinas and camping areas. Constant promotion of economic and tourist potentials. Free Zone Novi Sad, allows the import and export of goods and services free of duty. City Council offers compensation for land development, and taxes may reduce to 50% for construction of facilities whose value exceeds 1.000000 €. This project must employ more than 50 persons for an indefinite period, within 4 years from the date of signing. Compensation for land development paid in cash reduced by 40% by 31 December 2011.
Novi Sad	Permanent infrastructure equipment for municipal building, fast administration, e-administration and System 48, which “solves the problem” within 48 hours. There is a Geographic Information System that helps in finding a location for investment. Best taxes in the region, a good environment for investors.
Indija	Working zone established in the coast of river Tisa is located 8 km from the confluence of the Tisa and Danube.
Titel	Locations for the construction of tourist facilities are defined by Spatial plan of the municipality.
Stara Pazova	With the municipalities bordering the Danube, they participate in solving problems and proposed solutions related to the preservation and utilization of the river. The municipality granted 30% discount on the cost of utilities if the total amount is paid. There is a business incubator to assist in the establishment of new companies. There is a free zone.
Zrenjanin	There is a goods-transport zone “Danube port”. On the east side, Pančevo is adjacent to the area of Green field 2, and near on the south side there are Green Green 1 and Green field 3, which allows construction and development of commodity-transport and industrial centers. Danube port is located 11 kilometers from Belgrade.
Pančevo	There is the urban project “Marina on the Danube”.
Bela Crkva	The preparation of industrial zones for potential investors. Incentives only from the national level.
Smederevo	There are incentives in terms of municipal taxes and connections to infrastructure objects.
Veliko Gradište	Building and infrastructure (water, sewer, roads). Local: reduction of fees for land development and taxes on business. State incentives of 4000 to 10 000 € per newly created workplace.
Golubac	There is improvement of infrastructure, investment and tourism promotion, benefits for investments of investors, participating in the IPA cross-border cooperation projects, GIZ projects and so on. By decisions of Municipal Assembly of Kladovo, investors are exempted from paying fees for land development, depending on the type of activity and the number of new employees. It varies from 0 to 100%.
Kladovo	
No answer: Negotin, Požarevac, Kovin, Belgrade, Majdanpek, Sremski Karlovci	

Judging by the responses to the question of municipal efforts to attract investors, it can be concluded that awareness of the importance of creating a positive business climate is very high. The efforts of municipalities mainly relate to infrastructure equipment (roads, electricity, etc.), industrial and free zones

(where they exist). Also, many municipalities guarantee fiscal incentives to investors. Incentives for new jobs come from the republic level, and these incentives are greatest for investors who run businesses in underdeveloped municipalities.

The strategic development documents are the basis for the policy management of local socio-economic development. When we asked if the municipality/city created such documents, we got positive answer in almost all municipalities/cities. Mostly, these are local economic development plans and documents related to Sustainable Development and Spatial Plan.

2. What development projects related to the Danube are implemented or ready for implementation?

Table 12. Answers to the question E.2.

Municipality	What development projects related to the Danube are implemented or ready for implementation?
Sombor	Construction of the dock for cruise ships in Beždan, cycling paths along the Danube. The inclusion of cultural facilities in the tourism and promotion of the protected nature reserve Upper Danube basin
Apatin	The first international marina on the Danube in Serbia with a capacity of 400 berths, dock for cruise ships in 1401+620 km section of the left bank of the Danube, logistics center in the port complex, utility equipment for RTC with the port and free zone. Sports and recreation complex near the international marine and dock on the Danube. A museum.
Odžaci	The general regulation plan for goods-transport center, detailed regulation plan for marina, channel Danube-Bogojevo. Also, the plan for road arrangement and infrastructure to the village near the Danube.
Bač	Electrification of the Danube border zone, construction of the road from Bođani to Buckovac (local border crossing). It is planned to launch an initiative to incorporate local border crossing Bač-Vukovar. Marina construction in Bačko Novo Selo. Preparation of a study on the state of cycling routes in the Danube region.
Bačka Palanka	Planned projects: construction of a marina on the Danube. Tourism master plan and detailed regulation coastal plan are worked out. Project for reconstruction of sports facilities on the Danube.
Bački Petrovac	Project "Danube Dream". Completed construction of a solid road from Gložan to the banks of the Danube, approx time 3km.
Beočin	Marina in Banoštor. Marina in Beočin. Work zone "channel".
Novi Sad	Reconstruction of defensive embankments on right bank of the Danube, in order to protect from the "century water" with the reconstruction of water supply and transport infrastructure. Completion of the project "Reviving the banks of the Danube", within which is set an information center and a souvenir shop on the quay, near the dock. The plan is to build a new road-rail bridge "Žeželj" over the Danube and the new town bridge on the pillars of the old bridge "Franc Jozef".
Indija	Marina in Stari Slankamen. Lesend.
Titel	Project for planning and coastal settlements of waste waters. Other projects under Danube Strategy.

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Stara Pazova	Developed conceptual design of marine in the Stari Banovci. Public Water Management Company “Vojvodina Waters” is doing technical documentation for stone fort to protect it from further erosion. The plan is to reconstruct the road Belegiš-Surduk.
Zrenjanin	Projects under the Danube Strategy. The construction of waste water purifiers is in plan.
Belgrade	The study for Local Environmental Activation Plan (LEAP) of coast, Zemun Quay, Marina Ada Huja.
Pančevo	Accepted the urbanity planning documents that will regulate the future construction in areas along the Danube. Plans to provide resources from European funds necessary for the expropriation, filling and infrastructure equip of the land in “Green field” zones.
Kovin	Kovin Ports. The arrangement of the marine Dunavci. Removing the sludge of Dunavac in order to create the conditions for building a marinas, and develop nautical, hunting and fishing tourism.
Bela Crkva	Planned project “Marina on the Danube” and all surrounding infrastructure.
Smederevo	Relocation of the dock and the removal of industrial sidings. New port with multimodal logistics center. Reconstruction of defensive lines in the area of the city and fortress. Arranging shore. Passenger river port and marine. The formation of the industrial port and free zone outside the city, in Godominsko polje.
Požarevac	Archaeological research, road infrastructure, port, marina, hotel... Research on the detection of oil and gas on Island 1, and finding of the construction materials (clay, quartz sand, gravel and sand) along the Danube. Use of renewable resources (the wind, the water, the sun). Pedestrian and bicycle paths in Kostolac.
Veliko Gradište	Tourist complex at Silver Lake is planned. There is an initiative with the Romanian side of Danube to constructe the bridge between Serbia and Romania.
Golubac	Technical documentation for revitalization the Golubac fortress and bicycle-pedestrian path Vinci-Fortress-Golubac Town. The main project for the rehabilitation and reclamation of landfills. There is a plan is to establish river traffic Usije-Moldova Nouva, build a plant for the purification of waste water, and to reconstruct and build a sewage system.
Majdanpek	Plan is to build the dock for passenger and freight traffic. Other plan is to build industry zone “Kladušnica-Davidovac”. Also, plan is to build an access road and site planning of Trajan’s Board and Trajan’s Bridge. Promotion of the municipality as a suitable holiday destination on the Danube.
Kladovo	Plan is to build an access road and site planning of Trajan’s Board and Trajan’s Bridge, as well as construction of the dock for passenger and freight traffic.
Negotin	Partially completed project of tourist-recreation complex on the Danube called Kusjak. Planned implementation of tourist-recreational complex “Danube pearl”, Mihajlovac.

No answer: Sremski Karlovci

Based on the responses received to the question regarding the implemented and planned projects, it can be concluded that the project activities related to the Danube as well as projects related to raising business infrastructure in the municipalities of the Danube region are very intense. Most projects related to Danube are coastal planning, infrastructure equipment, and projects for improving tourism and development of strategic documents.

Tourism and hospitality, on the opinion of 11 local administrations are activities that have the highest potential use of the Danube. Next are traffic and cargo transport, industry and the exploitation of sand and gravel, agriculture and shipbuilding. The fact that only three municipalities/cities listed the fishing industry as a user of most potential of the Danube, is very surprising. Only two municipalities find that electricity and water have the greatest benefit from the Danube.

3. Which industries are using potential of the Danube the most?

Table 13. Answers to the question E.3.

(The possibility of multiple responses)	N	%
Tourism and hospitality	11	45,8
Traffic, transport, shipping, freight	10	41,6
Industry	6	25
Exploitation of sand and gravel	6	25
Agriculture	5	20,8
Shipbuilding	4	16,7
Commercial fishing	3	12,5
Forestry, wood processing	3	12,5
Energy	2	8,3
Water Management	2	8,3

Based on the responses can be concluded that local communities rely on the earlier approaches to water use – as a waterway for holiday and recreation, and less as the ability to use the huge water resources, which is a missing resource in the world.

F. Cooperation in the Danube region/promotions/events

Of all the promotion activities on the potential of the Danube, in the municipality participation in fairs and promotions is the most common. In almost all municipalities/cities, we got answers that they regularly participate in local fairs and Tourism Fair in Belgrade and Novi Sad. Almost every representatives of the Danube region municipalities/cities have participated in tourism fairs abroad.

We asked them with which municipality from Danube region in the country their own city/municipalities have the cooperation, and we received numerous answers suggesting that the cooperation in the Danube region between local administrations in Serbia is very good. This cooperation mainly concerns the united tourism events and fairs. Almost all municipalities/cities in Vojvodina have reported that cross-border cooperation with municipalities/cities in the

Croatian and Hungarian Danube region, while municipalities of Eastern Serbia cooperate with the Romanian Danube towns.

1. Does the city/municipality organize tourist events/fairs/festivals and so on related to the Danube?

Table 14. Answers to the question F.1.

Municipality	Tourist events related to Danube
Sombor	Sombor's Kettle, Bodrog Fest, Day of the Danube, Danube Regatta
Apatin	Apatin's Fishers Nights, TID Regatta
Bač	Danube Regatta, Volleybal Tournament, Bač's Kettle
Bačka Palanka	International Day of the Danube, TID Regatta, Danube Ball
Bački Petrovac	International Day of the Danube
Beočin	River Fest (in preparing)
Indija	Photosafari, Golden Kettle of Indija Municipal, Day of the Danube
Stara Pazova	Golden Kettle, Danube Regatta
Belgrade	Day of the Danube
Pančevo	Pančevo's Eco Regatta (during the Day of the Danube)
Smederevo	Day of the Danube, Danube Regatta
Požarevac	Day of the Danube, SFAS, Festival of Amateur Theatres of Serbia, Bečarac
Veliko Gradište	Fishers Nights, Silver Lake Film Festival
Golubac	Fair of the Danube, Ethno Festival
Majdanpek	Day of the Danube, Poreč's Kettle, Iron Gate Sailing Cup
Kladovo	Golden Bučka, Ethno Festival, Iron Gate Regatta, TID Regatta
No Answer: Odžaci, Bela Crkva, Kovin, Titel, Sremski Karlovci, Zrenjanin, Novi Sad, Negotin	

In most municipalities/cities in the Danube region tourist events are held. Cooperation in the Danube region exists, but without concretization. No joint venture, cooperation or other form of common company was a result of this cooperation. Joint ventures are in most cases related to cross-border cooperation projects financed by the European Union.

Conclusion

The given data on water availability in Europe, length and water capacity of the Danube confirm that Danube is significant European river. The Danube is powerful in Serbia due to its river tributaries. If we add to this list the data on water consumption in Serbia, we can freely say that the Danube is a significant water potential of Serbia. However, according to the results of the questionnaire, it is obvious that the local communities, although being aware of the potential of the Danube, are not working enough on creating the conditions for its use for development purposes. The answer to the key question of the questionnaire was the same in 13 municipalities/cities – the potential of the Danube is very little used, 11 said that it is under-used, and there were none satisfying answers. This confirmed the general hypothesis. In addition, the plans of local communities

rely more on previous approaches to the use of water – as a waterway for recreation, etc, and less as the ability to use the huge water resources, which the world lacks. The analysis results show that municipalities and cities in the Danube region are not working enough to establish the conditions for company development in the area. It seems that there are two parallel courses of action. On one hand, the local administration is trying to establish cooperation with other communities and to develop the infrastructure necessary for river transport and tourism. On the other hand, companies with numerous problems that have come with the process of transition are trying to preserve their business. They think less about the development. Two different flows confirm that there is no cooperation between local communities and companies, and the consequences are reflected in the economic results of the Danube, making the second thesis correct. If there was a joint action of the local communities and companies, strategic development plans based on sustainable development could be developed, and the future belongs to those who understood and appreciate natural resources and use them in a sustainable manner.

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