NATIONAL ANALYTICAL REPORT ON THE SERBIAN PART OF THE TRANSNATIONAL THE SERBIAN PART OF DANUBE CATCHMENT AREA, INCLUDED IN WORK PACKAGE 3 "TERRITORIAL SURVEYING AND EVALUATION (ANALYSES)"

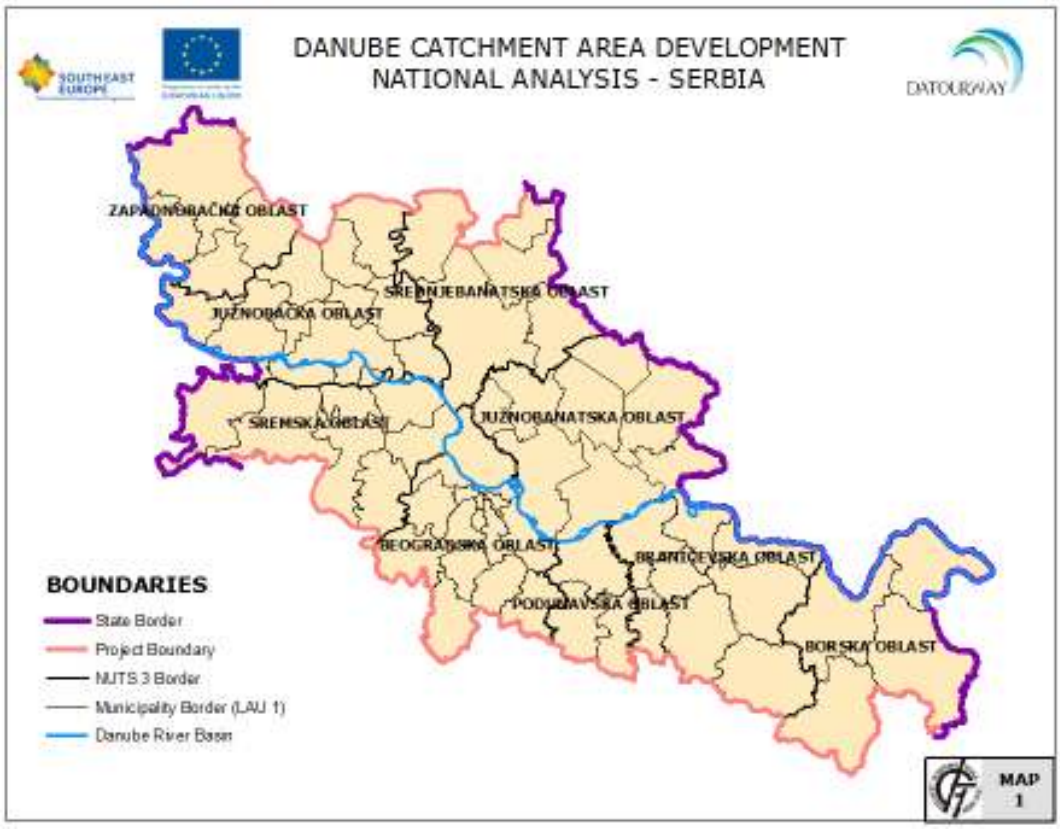
NOVEMBER 2010

1. MACRO-REGIONAL RELATIONS: POSITION OF THE SERBIAN PART OF DANUBE CATCHMENT AREA

The Danube River is one of the most important factor for economic, urban, cultural and historical development of Republic of Serbia. It is the factor of effective European cooperation, as well as national and regional development based on potential of the river to intensify agriculture through irrigation, development of industries with linked to cheap water-borne transport, shipping, port activities, seasonal recreation and cultural tourism.
The Serbian part of Danube catchment area covers all 9 counties (NUTS 3 regions) bordering the Danube, which are part of the three NUTS 2 regions, comprising 73 municipalities and 867 settlements with a total area of 29 272,0 km^2 or 33,1% of Serbia, as follows:

1. Part of the *Region Vojvodine*, including the NUTS 3 regions bordering the Danube river: *Zapadnobačka oblast* (4 municipalities); *Južnobačka oblast* (17 municipalities); *Srednjebanatska oblast* (5 municipalities); *Južnobanatska oblast* – (8 municipalities); *Sremska oblast* – (7 municipalities).
2. Part of the *Beogradski region* comprising of NUTS 3 regions with the following centres: *Beogradska oblast* (17 municipalities);.
3. Part of the *Region Sout and East Srbije,* including the NUTS 3 regions bordering the Danube river: *podunavska oblast* (3 municipalities); *Braničevska oblast* (8 municipalities); *Borska oblast* (4 municipalities).

Picture 1. Map of the scope of the Serbian part of Danube catchment area



The position of the project territory, assessed on individual socio-economic indicators is situated in a different manner in the national territory. This can largely be determined by the resources and potentials available to the region concerned.

The river Danube dominates in the area covered by the Serbian part of Danube catchment area. The Danube with its length of 2860 km is the second longest river in Europe and one of its most important water traffic routes.

Picture 2. Dunav River Basin

It runs through Serbia in the middle part of its course, in the length of 588.5 km, of which about 362 km through the territory of Vojvodina, which amounts to 61.5% of its total flow running through our country. Flowing through the area of the Pannonian Plain (the so called Pannonian sector), the Danube has a gradual descent and slow speed of flow.

The average descent in this sector is 5.2 cm/km, and the average speed 4 to 5 km/h. In this area the river is characterized by uneven widths and depths. The riverbed varies from 380 m to 2000 m (average width 600 m), and the depth is from 5 to 23 m.

In the Pannonian sector, which the area covered by the Plan belongs to, the Danube is timid and, due to the small descent, its course is characterized by numerous meanders. It also in this region receives large tributaries such as the Drava, Tisa, Sava, Morava and others.

The Serbian part of Danube catchment area, as the whole Serbia, which is now at the historical crossroads of the intensive adaptations to the European integrations, with a powerful growth of competitive capacities of institutions, enterprises and individuals is now on the way of defining the development clusters and economic sectors with chances for success. It will have to build, independently and with the assistance of the international community, as soon as possible, the competitive growth strategies. In that context, tourism imposes itself as an unavoidable complex, with unused growth potential. The tourist attractions in The Serbian part of Danube catchment area have not been enough valuated in the past, simply because tourism has never been a serious subject of the development policy of Serbia.

The Serbian part of Danube catchment area has a diversified structure of attractions and it is near the traditional and new tourist markets, has a long history with rich cultural heritage and general distinguish ability, preserved natural resources, relatively good communications and very important human potential. The process of transformation of comparative and competitive advantages in the tourism of the Serbian part of Danube catchment area, ad in whole country represents a part of the comprehensive reform processes in Serbia and of the political attitude towards tourism as an important generator of national well-being.

In spite of numerous attractions, tourist products in the Serbian part of Danube catchment area neither enough developed nor well commercialized at the international tourist market. With the present 33541 accommodations in obsolete facilities tourism destinations in Serbian part of Danube catchment area in Serbia are far from achieving the business results achieved by its competitors. Because of the closed market, the process of restructuring and privatization lagged behind, there were no important investments, neither from the country nor from abroad, and new forms of tourist offer have not been developed. Because of excessive centralization there were no investments in the maintenance of inherited tourist destinations, for the local communities could not financially satisfy the requirements of maintenance and of new development. The value chain in the tourism of The Serbian part of Danube catchment area, except partially in Belgrade and Novi Sad, was not developed, and that fact opens the question of standard, quality of services and, finally, the loyalty to Danube area as tourist destination in Serbia. Danube and his gravitation region, in Serbia is recognized as a river which has a great potential for development of tourism. The Serbian part of Danube catchment area was the oldest recreation region in South Europe.

- According to Statistical office of the Republic of Serbia catering trades (there are no data's for whole tourism sector and this data's considering number of employed and hired people in hotels in restaurants), employ 1,68% of the total number of employed and hired people in the Serbian part of Danube catchment area, the relative share being commensurate with the national level indicators;
- In Serbia there is 1000 mineral and termal springs and over 40 spa's. In the Serbian part of Danube catchment area has 7 spa's with mineral and termal springs;
- There are 2 national parks in the Serbian part of Danube catchment area, 4 eco trails and Eurovelo international cycling route.
- Belgrade and Novi Sad with its surroundings represent main tourism destinations for short breaks and M.I.C.E. toruism. They are the most developed tourism destination in The Serbian part of Danube catchment area.
- There are 335 accommodation facilities with 33541
- Extremely rich cultural heritage of the Serbian part of Danube catchment area are important prerequisites for effective development of **tourism**.
- There is a great potential for rural tourism development, especially in the municipalities on Danube bank. In the Serbian part of Danube catchment area is a significant number of rural tourism facilities (38 farms, 16 registered villages housekeepings and 28 ethno houses).
- There is exixting tourism infrastructure for the special interests tourism offer.

The location of the Serbian part of Danube catchment area in terms of transport gives opportunities for all transport modes (road, rail, water, air, multimodal) and the passage of two important pan-European transport corridors. The opportunities are not realized to the necessary extent and the area is characterized by relatively low density of road infrastructure, transport infrastructure amortized, under-utilization of airports and the Danube ports.

Currently, however, the role of the river is underestimated in the economic life of the country. The River Danube is still acting as a frontier of Serbia rather than as a factor for economic development and transnational cooperation.

2. SPATIAL STRUCTURE, SETTLEMENT SYSTEM

2.1. Settlement network and characteristics

The Serbian part of Danube catchment area comprises 871 settlements situated in 9 NUTS3 counties and 68 municipalities (LAU1). Settlement network in the area has

average settlement density. There are 3,0 settlements per 100 sq km that is by far under the national average (7,0 settlements per 100 sq km).

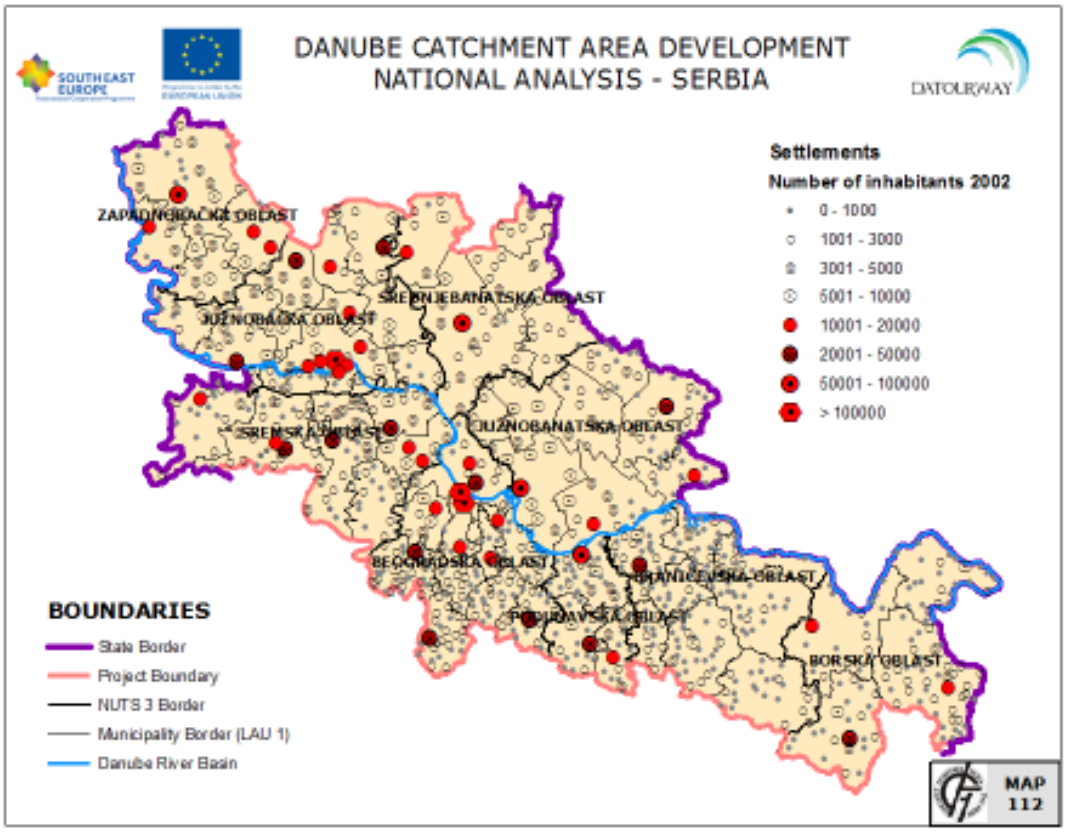
The settlement density analysis in the The Serbian part of Danube catchment area shows regional differentiations: the lowest density is in Zapadna Backa and Srednji Banat conty (1,7 settlements per sq km both); The highest density is in city of Belgrade (5,1 settlements per sq km) and Branicevo county (4,9 settlements per 100 sq km).

Considering total population 44 municipalities recorded the decrease in population and 24 the increase for the period between 1991 and 2002 census. The biggest problem is that some municipalities are facing depopulation in all the settlements that consists of or majority of them (Zitiste, Nova Crnja, Novi Becej, KOvacica, Malo Crnice, and some others). On the opposite side, some municipalities have population growth in all or most of the settlements (Stara Pazova, Ruma, Indjija, Temerin, the city of Novi Sad). This trend is clearly showing provincial migration from less developed to more developed municipalities.

Settlements in the The Serbian part of Danube catchment area are categorized by their size in 8 groups.

The concentration of population, considered by the settlement size category is relatively unbalanced: the greatest concentration of population (28,6%) is in cities with the population over 100 000 inhabitants (Belgrade, Novi Sad); the settlements size category from 1001-3000 inhabitants is the second one with 14,8%. This facts indicate the great polarization of settlements. Due to the accelerated development of Belgrade and Novi Sad it is expected the population growth in these two cities for the coming period. That would certainly affect the spatial development of the whole region and the country.

Picture 3. Settelments in the Serbian part of Danube catchment area



Most of the counties in the project territory have population decreasing trend with the exception of Južna Backa and Srem county. This is direct consequence of intensive economic development of Novi Sad urban agglomeration and very active urban sprawl development between Novi Sad and Belgrade (along the corridor X – Indjija, Stara Pazova, Nova Pazova).

The settlement network in the Serbian part of Danube catchment area can provisionally be divided in two parts: the northern part (north of the Danube and the Sava rivers) and southern part (southern of the rivers). The northern part is Vojvodina region with the relatively structured and balanced settlement network. Due to the general planning reconstruction of the whole settlement network system in 18th century the region got basic population distribution guidelines that shaped the present settlement network. Basic characteristic of the settlements in Vojvodina region is strict geometrical spatial composition. In the southern part, the settlement network has, together with some planned spatial structures, spontaneous natural (most often geomorphologic, hydrological) and socio-historical character. The most common morphological structure of these settlements is linear spatial development (along the main roads).

One of the most common features of cities is that their functions have the power to overcome the needs of the local (city) population. Therefore they are turning toward satisfying needs of the population of wider area and nearby settlements. It is not that all the city functions have the same emission power. Therefore the power emission of a city is not always within the same borders. Some gravitation centers have functions that influence vast area around, but other functions are having limited power that influence just immediate surrounding. Therefore there are smaller, lower rang gravitation centers formed within huge urban centers. They are performing as secondary centers for settlements in their immediate surrounding. This phenomenon could generate many secondary center categories.

The connections between cities and the satellite settlements perform in both directions and commonly are stronger if they are closer.

Proximity of gravitation centers is causing both their eccentric position in the wither territory and formation of micro-gravitation areas with the small territory and fey settlements.

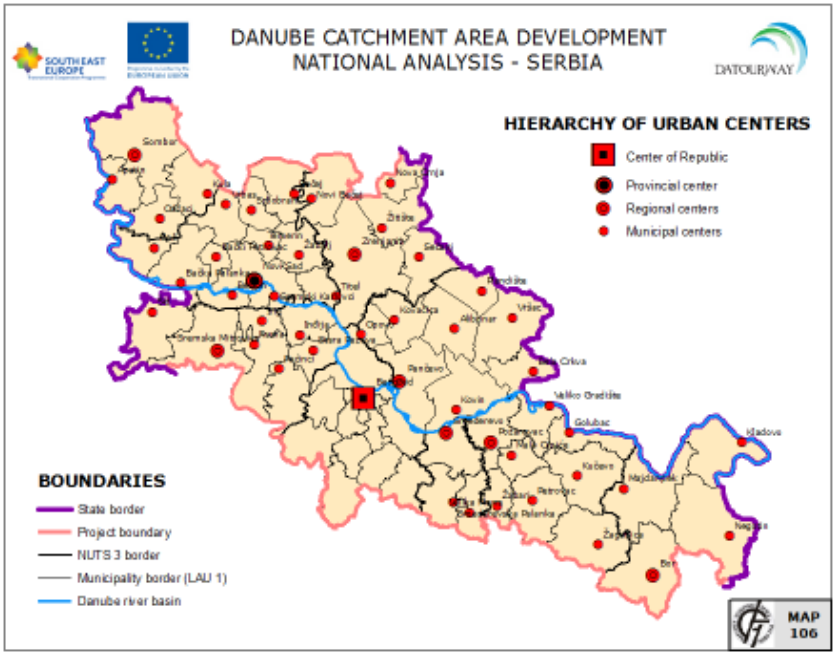
The spatial formations where the settlement center is set on the cross point of two roads are common for rural environments. Those are relatively low density territories without old urban centers and with new administrative subdivision. In many cases the main quality of a settlement location was just the crossroad that led the decision to announce it as the municipal center. Therefore the settlement evolves to be the gravitation center of wider area. If the crossroad was on the periphery of the gravitation area, the center would have developed as eccentric municipal center. Typical examples are Plandiste, Zitiste, Pecinci, Bac and Backi Petrovac, Kladovo, Zabari, Malo Crnice municipalities.

2.2. Administrative classification of settlement

Taking in consideration the administrative criteria, the development level of some city functions, location and importance in the network, Settlements in the Serbian part of Danube catchment area are grouped in three following categories:

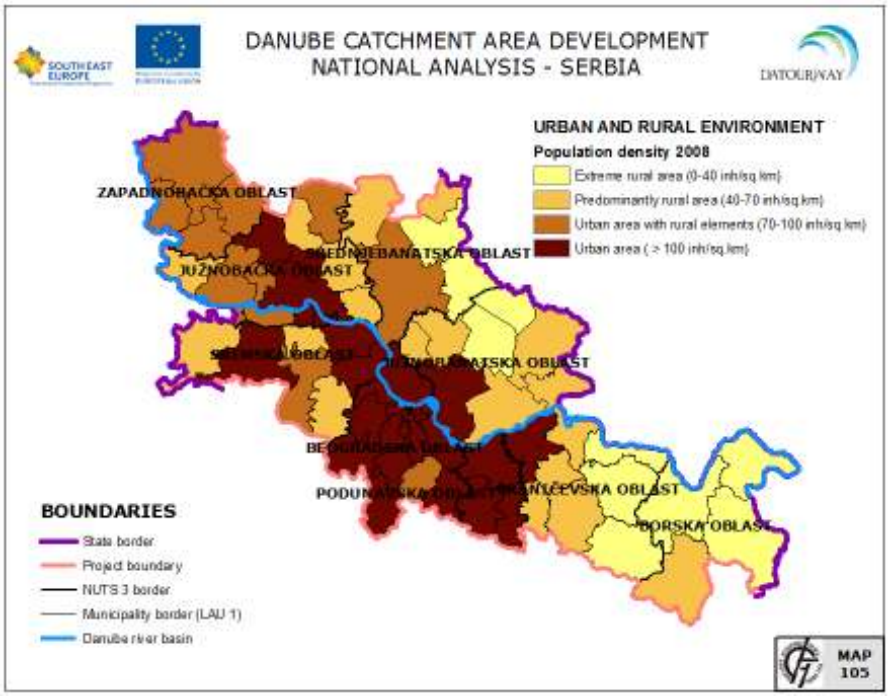
- Cities – macro regional centers, provincial centers or regional centers,
- Urban settlements – municipal centers,
- Rural settlements.

Picture 4. The hierarchy of urban centers (2002) in the Serbian part of Danube catchment area



The map is showing the national capital Belgrade; the provincial capital Novi Sad, regional centers Sombor, Pancevo, Sremska Mitrovica, Zrenjanin, Smederevo, Pozarevac and Bor; and municipal centers. The space of the city of Belgrade is dominating with its functional urban area. Grouping of the most populated settlements is occurring in the radius of 100 km (Belgrade, Novi Sad, Pancevo, Zrenjanin, Smederevo and Pozarevac).

Picture 5. Urban and rural environment (2008) in the Serbian part of Danube catchment area



Through out the history migrations are common phenomena in Serbia. One of the most common reasons for population movements is economical rationality. Population distribution and population density changes have caused shifts in settlements network. The Danube is the backbone for the population and settlements concentration (showed on the map 2). The most urbanized region of Serbia is on the Danube River.

Extremely rural settlements situated on the Danube are those lying on the border with Romania. They continuously suffered from underdeveloped relations between two countries and lack of investments in development and maintenance of infrastructure.

3. NATIONAL TOURIST DEVELOPMENT CONCEPTS, PROGRAMS

3.1. Documents for national, provincial and local planning

3.1.1. Tourism Strategy of the Republic of Serbia

Serbia is now at the historical crossroads of the intensive adaptations to the European integrations, with a powerful growth of competitive capacities of institutions, enterprises and individuals. Serbia is now on the way of defining the development clusters and economic sectors with chances for success where it will have to build, independently and with the assistance of the international community, as soon as possible, the competitive growth strategies. In that context, tourism imposes itself as an unavoidable complex, with unused growth potential. The Serbian tourist attractions have not been enough valuated in the past, simply because tourism has never been a serious subject of the development policy of Serbia. At the other hand, many destinations of the world with similar or even weaker attraction potentials invested efforts during the recent years, which brought them to the map of relevant tourist countries.

At present Serbia only has comparative advantages in tourism for it has a diversified structure of attractions, and it is near the traditional and new tourist markets, it has a long history and general distinguish ability, preserved natural resources, relatively good communications, and an important human potential. The process of transformation of comparative and competitive advantages in the tourism of Serbia represents a part of the comprehensive reform processes in Serbia and of the political attitude towards tourism as an important generator of national well-being.

The Government of Serbia in 2005 adopted a strategy for tourism development in Serbia, which was elaborated by the Ministry of Tourism and Trade, together with Horwath Consulting Zagreb and Economics faculty in Belgrade. This strategy was faced with the fundamental aspects for the promotion of tourism development. First of all define the framework for which the competent authorities in the tourism sector and split the four clusters of Serbia: Vojvodina, Belgrade, Southwestern and Southeastern Serbia.

Picture 6. Tourism cluster map of Serbia

Source: Tourism Strategy of the Republic of Serbia

Picture 7. Positioning of tourism clusters in Serbia

Source: Marketing Strategy of Tourism of Vojvodina

As it could be seen at Picture 7, the first possible approach (*Where Danube meets Balkan*) to the future positioning of Serbia as tourist destination is the approach which imposes itself naturally when one takes into account:

a) The advantage of promotion of tourist experience in the positive "emotional" context, i.e.

b) The fact that the notion "Balkans" was not used in tourist positioning
Bearing in mind the fact that no traditional Balkan states tried to value in tourism the notion "Balkan" which obviously represents an inexhaustible basis for "branding" the tourist experiences on the "emotional" level, it is important to say that this option could represent, in long term, a big marketing potential in tourism. However, it should be mentioned that there is a general lack of positive connotation of the notion of the Balkans. Also, for positioning of Serbia as destination, Strategy emphasizes importance

of Danube. According to Strategy, it is possible to use another approach to the tourist positioning of Serbia with the combination of several established strategic advantages, i. e. success potentials, which are in direct correlation with several tourist products which could be immediately globally commercialized, without reserve and with minimum investments.

Approach is based on the following assumptions:

- the exchange value and the distinguish ability of the Danube as a strategic European continental tourist resource which includes, in its most attractive part, a number of Serbian tourist attractions;
- the key attractive value of Belgrade which represents, after Vienna and Budapest, the third "Danubian" metropolis with strong marks of cosmopolitism, of hedonism and of gastronomy;
- the key geostrategic position of Serbia in the context of Central and South-East Europe, whose stability strongly influences the stability of the European Union as a whole.

This approach, therefore, points to the conclusion that the "light motion" Danube should be used in the slogan for the tourist positioning of Serbia, because of the following reasons:

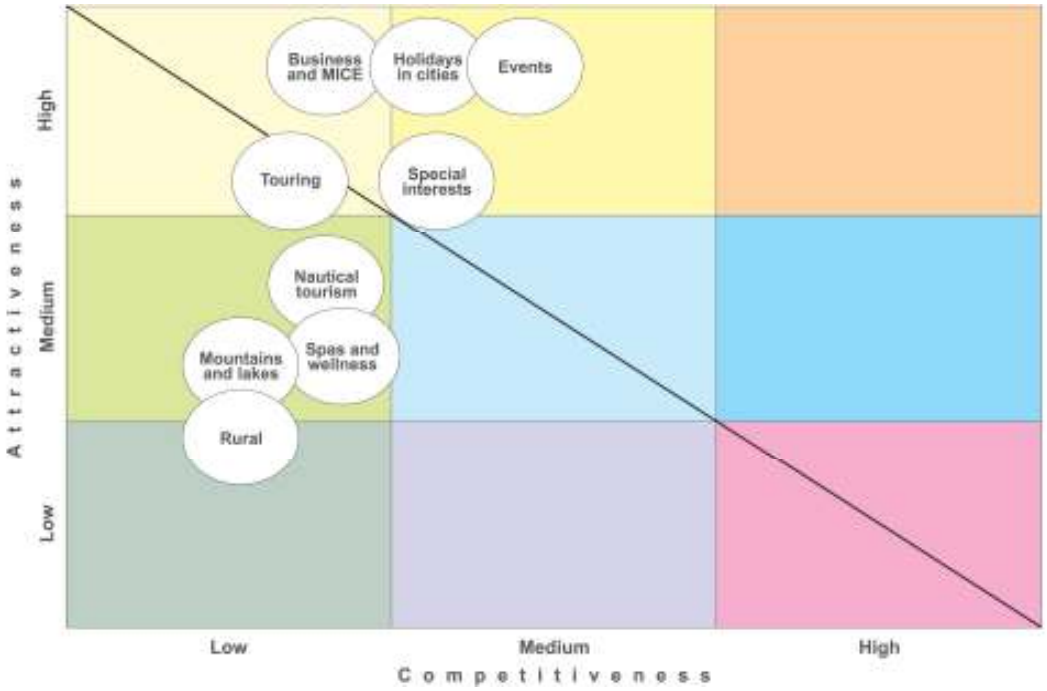
- the tourist valuation of the Danube in its entire navigable part, and, consequently, the additional affirmation of Belgrade as a Capital City, represent, for Serbia, the "quick win" option;
- other countries on Danube didn't use it in their tourist slogans that notion, although it is obviously an important resource on the global scale;
- the size and the importance of the Danube Corridor through Serbia may direct the desired development swing to all parts of Serbia ("spill-over");
- there are no other tourist resources in Serbia which are at the same time nationally cohesive and globally competitive.

Because of all above mentioned reasons, and bearing in mind the economic interests of the tourist sector of Serbia, it would be appropriate to rely, at this moment, the Serbian promotion on the Danube as the key subject of national tourist campaign(s), especially if the national positioning is finally processed, and by the use of appropriate spatial positioning of tourism

Main clusters in Serbia, are positioned as:

- Vojvodina - water treasures, Pannonian delight
- Belgrade - seductive and exciting
- South-West Serbia - history and tradition with pleasures in nature;
- South-East Serbia - still undiscovered (as it could be seen in picture 7.).

Picture 8. Matrix of attractiveness and competitiveness of tourist product interesting for Serbia



In addition, set aside ten types of tourism products (picture 8.) and appropriate strategies for their development to make them competitive:

- Business and MICE
- Touring
- Special interests
- Rural tourism
- Events
- Spas and wellness tourism
- Nautical tourism
- Mountains and Lakes
- Short breaks

The highest priority is given to the following products:

1. Holidays in cities, business tourism + MICE and events
2. Touring, special interests
3. Nautical
4. Spa/wellness, mountains and lakes, rural tourism.

The Serbian part of Danube catchment area encompasses parts of three clusters of Serbia: Vojvodina, Belgrade and South-eastern Serbia, and for the further analysis can be applied all the above forms of tourism include.

The following table illustrated the Strategy of development of tourism products that are listed as provided for in the National Strategic Plan for Tourism.

Table 1: Travel products and development strategies in Serbia

TOURIST PRODUCT	STRATEGY FOR DEVELOPMENT
BUSINESS AND MICE	For the development of this product it is important emphasizing infrastructure equipping and promoting cultural events. For Serbia is particularly important City Break event that is organized in Belgrade
TOURING	Arise due to low cost companies that organize their flights and in Belgrade. Development, promotion and supply in international market require great effort in terms of financial and human resources.
SPECIAL INTERESTS	These products relating to hunting, cycling and photo tour, which is able to meet the specific needs of consumers
RURAL TOURISM	Can be promoted in areas where farms are. It is important start from the definition of localities where it is possible to plan and develop this type of offer.
EVENTS	Organization of events is an important marketing tool because promote the image of Serbia in the international tourism market. Remind the EXIT festival in Novi Sad, Eurovision Song Contest in Belgrade sporting event (Universiade)
SPAS AND WELLNESS TOURISM	Serbia has registered 50 spa centers, there are about 250 sites with thermo-mineral springs, and these are just potential areas for development of the tourism product. The development of these areas is entrusted private initiative and local governments, while modernizing the current centers concerned Government
NAUTICAL TOURISM	Waterways Danube, Sava, Morava and canalls in Vojvodina represent opportunities for development for the construction of marinas, ports and purification of rivers and canals
MOUNTAINS AND LAKES	The tourism product that offers the greatest prospects for development as the geomorphological structure of the territory. Development requires a great investment to improve infrastructure.
SHORT BREAKS	Related to tourism and transit trips, the goal is to be followed improved reception and tourist services in order to stimulate tourist to spend longer residing in the selected location.

In the 2007, when strategy of tourism development was adopted, the Government has developed 11 plans. It estimates for tourism potential and through the Department for normative and legal property business should prepare documentation related to the development of infrastructure in Serbia, so that potential investors obtain elements assessment. In addition, it is envisaged that 3 billion will be spent to build infrastructure for mountain and spa tourism, however, investments in hotel sector are the responsibility of private firms which Ministry of Economy and Regional Development doesn't provide a system of incentives and concessions.

3.1.2. Plan for the economic development of Vojvodina

Plans for tourism development are also implemented at the provincial level. Since 2002 The Executive Council of The Autonomous Province of Vojvodina and the German Association for Technical Cooperation (GTZ), conducted a project: Medium-term plan for economic development of Vojvodina. This project concerns the analysis of existing development and SWOT analysis of the Autonomous Province of Vojvodina, an analysis of human resources, infrastructure and economy in Vojvodina. The main result of this

analysis is the creation of strategic documents, namely the Program of economic development of the Autonomous Province of Vojvodina, with the primary objective of socio-economic development of the province over the significant sectors. The priorities defined in the program are related to the utilization of internal resources of the Province which includes the development of tourism, improvement of infrastructure (roads, energy supply and water) and training of human resources. Among the measures provided for the tourist economy stand to Measure VI Measure and XI. The first promotes exports by encouraging the presence of exporters in fairs and subsidized costs support in the preparation of materials, fact, established the Fund for Export Promotion Agency focused on small and medium businesses and tourism organizations covering 50% of the cost. The second measure aims to promote nautical tourism along the Danube, by financing the investors in this sector. In addition, extracts the criteria for selecting sites suitable for construction of a marina. To finance the program 2006 allocated to 231,174,241 dinars, of which 13.5 million for implementation of the activities of the Fund for the promotion of exports and 8.7 million for a development project of nautical activities tourism.

In the Provincial Secretariat of Economy one of the main components is the development of nautical tourism NTD. Implementation of this program envisaged the construction of a network of marinas on the Danube in Vojvodina. The goals of the NTD are as follows:

1. Development of nautical tourism on the Danube;
2. Capacity building nautical infrastructure: marinas, bridges, ports, tourist attractions on the water, etc.
3. Attracting tourists in Vojvodina;
4. To link Vojvodina, as a region, with tours along the Danube;
5. Tourism promotion and economic development environment in the vicinity of nautical tourism facilities

After the presentation of a study on "The Study of marinas network on the Danube in the Autonomous Province of Vojvodina", 10 November 2006, the Provincial Secretariat of Economy has entered into a cooperation agreement regarding the implementation of programs and projects of the study with 15 municipalities: Sombor, Apatin, Odžaci, Bač, Bačka Palanka, Beočin, Bački Petrovac, Sremski Karlovci, Inđija, Titel, Stara Pazova, Zrenjanin , Pančevo, Kovin and Bela Crkva. With this agreement is approved construction on sites reserved for marina by the local government and local Institutes of City Planning. The documentation is established detailed procedures for implementation of project, in order to define an integrated network of marinas on the Danube. Until now, agreements have been reached with municipalities: Sombor, Bela Crkva, Apatin, Sremski Karlovci, Inđija, Bač and Pancevo, which are actually, agreements on co-financing for the elaboration of detailed plans for regulating the construction of marinas on the major sites along the Danube. In these plans is provided seven possible sites for interested investors, which carries a simplified procedure for obtaining permits to build a marina. First marina in this project is open for nautical tourists over the past year, gas station is already open and it is operational, and secured and the anchoring of yachts which sail the Danube. There are other activities aimed at implementation of the project NTD that are still under way, with their definitive implementation (to 2009) expected to achieve the following results:

- Increasing the number of jobs for citizens
- Increase the inflow of foreign currency from tourism sector.

The importance of the Danube for the development of tourism in Serbia is reflected through the development of master plans for the Gornje Podunavlje and Donje Podunavlje regions as a tourist destination.

3.1.3. Master plan of tourism destination Gornje Podunavlje

"Gornje Podunavlje" is part of European corridor VII, located in northwestern part of Serbia (in the Autonomous Province of Vojvodina) and covers the western part of Bačka spreading along the left bank of the Danube River. For the most part this area is equal to Special Nature Reserve "Gornje Podunavlje" where the western part borders with Park of Nature "Kopački rit" in Croatia and in the north with the National Park "Danube-Drava" in Hungary. The whole area of "Gornje Podunavlje " which is a lowland terrain, main feature is a large riparian complex that is located in the territory of Serbia, Croatia and Hungary. The area is 1,528 km2 and it now lives in 130.076 inhabitants (with the highest population density in urban centers, Sombor and Apatin).

Master plan of tourist destination "Gornje Podunavlje", which is written under the Ministry of tourism and regional development, considers next steps for developing this destination:

- Analysis and evaluation of space available and total resources for development of tourism sector as a part of economy;
- Market analysis with an analysis of competition and benchmarking analysis;
- Shaping a clear vision of sustainable development of tourism in the area of the Gornje Podunavlje, detailed objectives and development strategy and growth-oriented model to generate economic prosperity;
- Development of a plan of competitiveness of this area, including the development of new products and experiences, and new standards of quality;
- Creating an effective marketing plan for positioning the above areas tourist market, by creating a clear image in the minds of potential tourists in the source markets, and
- Defining the investment strategy and global plan of investing in public and private sector, based on market incentives and adequate rates return on investment.

The main natural attractions of this region are the Special Nature Reserve "Gornje Podunavlje" with its biodiversity and the Danube River as a main traffic route across Europe, with its own system of channels. Of the additional attractions are as follows: Sombor with its old part, farms as indigenous representatives of the rural way life, and various religious and cultural objects. Other activities can be found are hunting, fishing, cycling, etc. Joining the tourism development stage of the "Gornje Podunavlje" is a part of the general economic and structural transformation of the area. In fact, there are the same or similar models of the surrounding transition countries. Entry into the tourism business "Gornje Podunavlje" should also be regarded as a response to globalization, where the service industry and the economy experiences create new opportunities for many, until yesterday unknown and inactive regions in tourism can find room for growth and development.

3.1.4. Master plan of tourism destination "Donje Podunavlje"

Tourist area "Donje Podunavlje" is spread in eastern Serbia, along the left bank of the Danube, on its course between the forts and the mouth of the Veliki Timok. According to the hinterland, the area provides the watershed between the basin Danube and the

Morava River basin, and across the Veliko Brdo, Rakobarski vis and Šomrda, descending to the south to Homoljske planine mountain, Mali and Veliki karst and Deli Jovan. Administratively, the tourist area of "Donje Podunavlje" includes five municipalities in Eastern Serbia: Veliko Gradište, Golubac, Majdanpek Kladovo and Negotin.

The main goals of Master plan of "Donje Podunavlje" are:

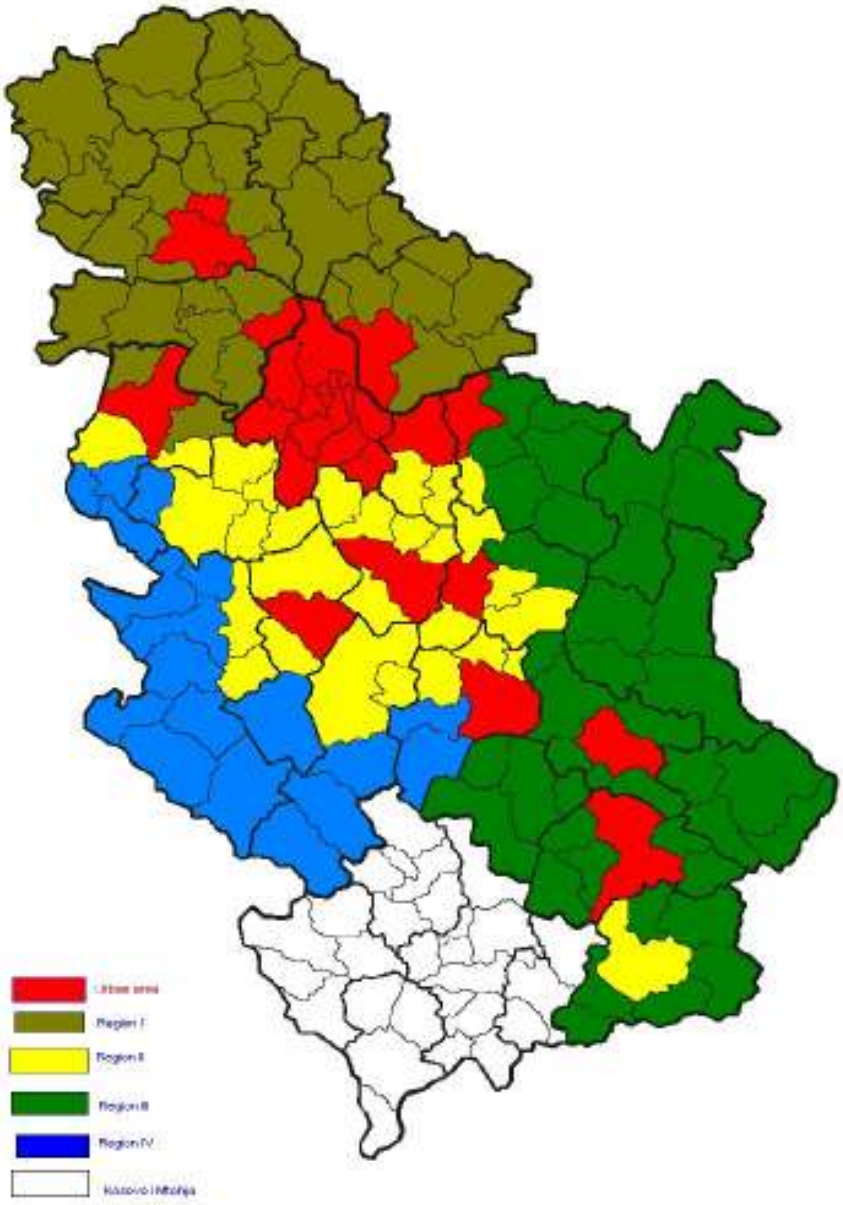
- Analysis and evaluation of space available and the total potential development of the tourism sector as part of economy;
- Market analysis with an analysis of competition and benchmarking analysis
- Shaping a clear vision of sustainable development of tourism in the area of the Donje Podunavlje, the detailed objectives and development strategy and growth oriented model towards generating economic prosperity;
- Development of a plan of competitiveness of this area, including the development of new products and experiences, and new standards of quality;
- Creating an effective marketing plan for the positioning of the said territory the tourist market, by creating a clear image in the mind potential tourists in source markets, and
- Defining investment strategies and global investment plan for public and private sectors, based on market incentives and adequate rates of return on investment.

4. Plan of Strategy for rural development 2009-2013

Tourism development in municipalities in rural areas is in accordance with a targeted policy implemented in Serbia, given by Ministry of agriculture, forestry and water management in 2009 which is consistent with the EU Rural Development Programme. The major part of municipalities in The Serbian part of Danube catchment area (except Belgrade and Novi Sad) is defined as rural areas (Map 1.), that means that they are eligible for receiving funding for rural tourism projects. Plan for Strategy for rural tourism has defined added economic activities for rural population that can be applied for The Serbian part of Danube catchment area municipalities and counties. Diversification of economic activities outside the farm will enable the creation of opportunities for employment and wealth creation to the target category of rural society and can provide sustainable economic feasibility of agricultural activity, which is the case with much of the rural society in Serbia.

The potential for diversification of activities in rural area lies at the heart of modern tendencies towards specialized products and markets outside conventional food chain, in various forms of tourism and recreation, local crafts, traditional recipes and restaurants, and other forms of goods and services that reflect desires of modern consumers for actual changes in products and services, and tourism destinations. In this sense, there are opportunities for micro and small enterprises in the provision of services. In rural areas, crafts, traditional food processing small-scale aquaculture new ventures such as organic production and bio fuel production. Selection of specific activities, to be encouraged to a great extent, depends on the degree of local innovation community, from individuals as well as factors such as the provision of sufficient additional cash influx, the question of whether the activities of traditional knowledge and expertise of local people and request for a fairly modest amount of input in terms of training, their compatibility with seasonal agricultural activities, exchanges and contacts between rural people and the rest of society.

Picture 9. The territory of Serbia to the types identified in rural areas



Source: Plan of Strategy for rural development 2009-2013

***Vision, expectations from the* the Serbian part of Danube catchment area**

In recent decades the Danube, as a tourist theme and content, is becoming increasingly attractive to domestic and European tourism market. Its relatively preserved natural values, that are in all European countries on Danube, the high level of protection and its natural amenities, cultural and archaeological heritage, is the continued Serbian and European tourist value at which it is possible to continue to build tourist facilities on longer-term basis. Bearing in mind the further development of tourism and increasing number of tourists in the entire area through Serbia it is necessary in the future to perform activities that will aim to meet the needs of tourists and visitors to the wider region of the Danube basin. International maritime zone of the Danube River is rightly considered one of the immediate circle of priorities of supply in European tourism. This,

to a large extent contribute to: the past development of tourism, the place, the role and importance of tourist recreation in modern times, as well as prospects of tourism in new century Jagged and varied forms of the Danube Basin in Serbia, with its offer may respond current market challenges of world travel demand that prefers recreation on water. The rich palette of contemporary forms from selective to nautical tourism, equally build fishing tourism, hunting tourism, rural tourism, photo safaris, eco-tourism, cultural tourism and events. However, nautical tourism on the Danube in Serbia is characterized as tourism paradox. By the world criteria, this part of the middle course of European blue highway absolute and relative terms has the best quality raw material for nautical and tourist recreation. First of all, the Danube is hydrological very attractive and varied course of the ten major tributaries, and input-output relationship with the channel network Danube-Tisa-Danube". Exclusive points of natural resources are: Special Nature Reserve "Gornje Podunavlje, National Park Fruska Gora, National Park "Đerdap", dozen of regional nature parks (including one in particular is attractive tourist" European Sahara" - Banat sandstone and hundreds of tributaries, ponds and marshes). However, this attractive part of the Danube is still poor with boats and yachts, local boaters do not use it enough. This space, using modern marketing activity, has the possibility for faster development of tourism, more tourist traffic, as well as a better placing of all areas for domestic and foreign tourist market.

Unfortunately, Danube areas in Serbia, except well known tourism destination Belgrade and Novi Sad, are not very popular for tourists and because of that,there is a need to create positive regional image. At the same time the developed areas are facing difficulties in product diversification, extension of market segments, ensuring higher revenues, longer season and increased accommodation occupancy rates. Moreover, the existing attractions and products are promoted separately and not as a part of bigger regional products. Cooperation and joint efforts for tourism development at local, regional and national level remain limited.

Development of strategic basis Danube tourism development should include items in the flow through which the river passes. Partial intergovernmental projects didn’t show sufficient expediency why the Danube and the area around it in some countries, tourism and general economic were ignored. Longer continuity and success was accomplished in protecting valuable natural and cultural resources.

Accordingly, this project seeks to contribute to initiatives completed so far and conceptual explanations of tourism development of the Danube, especially in our part. It certainly should be updated, amended and fit into the context of ambitious valuation, in which the concept of sustainable development permeated all aspects of the design of this space. Also, with the development of tourism cooperation between Serbia and the other Danube countries should expect intensive traffic of boats and yachts, and then the establishment of tourism and shipping lines. Given that the concern of sailors attached to direct the water flow and tourist value of the gravitational zone of the river, big problem is the selection of nearby attractions. Their selection should be the result of tourism development which is the potential content of nautical trip also included the natural and cultural assets that have the least amount of average values of indicators of tourist attraction and robustness as well as the high value of natural and cultural significance. Therefore the priority of project should involve integrated interregional, cross-border and transnational nature. Bearing that in mind, the Serbian part of Danube catchment area should emerge a common tourism strategy, define unique tourism market and a range of projects for development of Danube tourism products in the field of nautical, rural, cultural and special interests tourism in the Danube macro-region, built on sustainable principles.

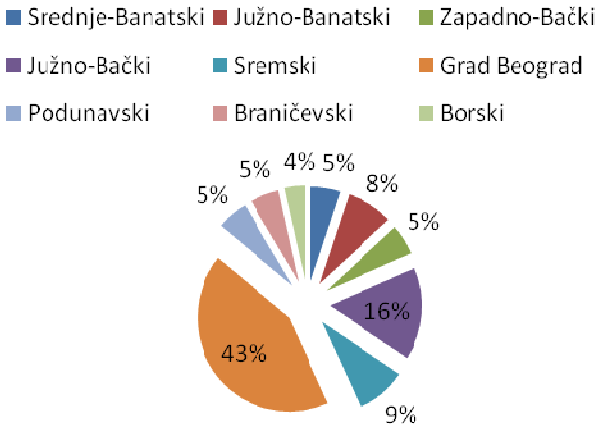
5. SOCIAL RESOURCES

5.1. Human resources

5.1.1. Demographic trends

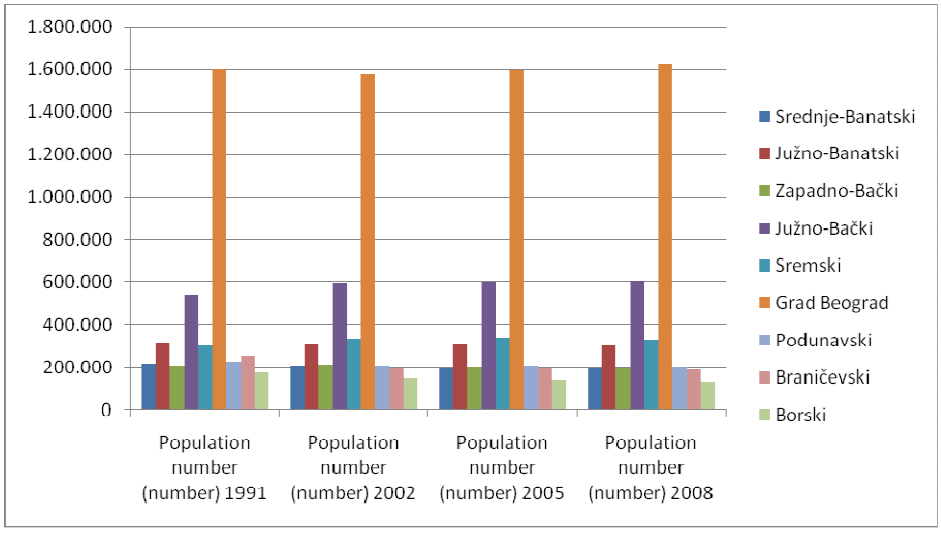
The plan area comprises 9 counties (5 in Vojvodina and 4 in Central Serbia). The population of the observed area at 2008 census was 3782792 (51.5 % of Serbia total population). The county population varies from 3.6% (Borska oblast) to 43% (Grad Beograd). In just two NUTS3 counties there is concentration of population of 59% of the area total population (43.0% the city of Belgrade (Grad Beograd) and 16.0% South Backa county (Južno Bačka oblast)), while in other seven NUTS3 counties there is the rest of 41% of total area population.

Picture 10. Population number in the Serbian part of Danube catchment area (2008)



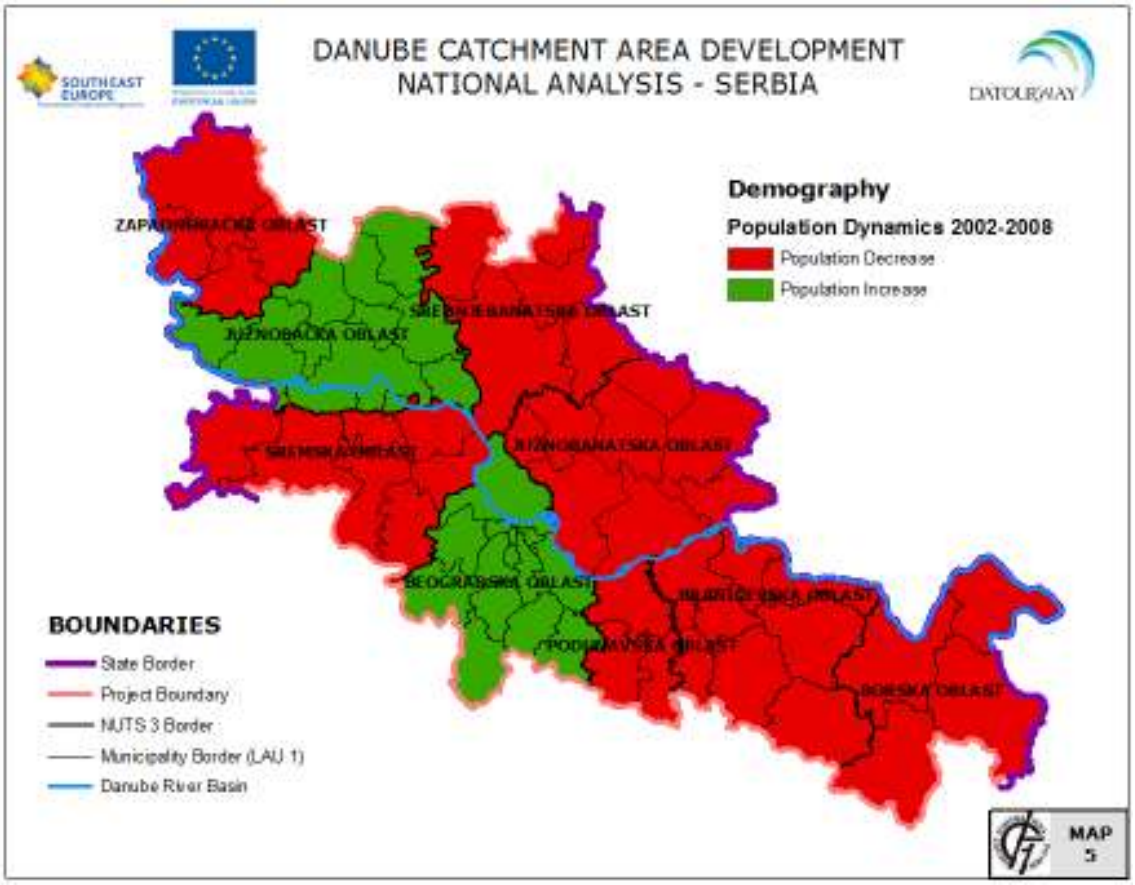
The population change in one census period (2002/1991) showed the negative tendency, registering the drop of population for 1.3%. Four NUTS3 counties (West Backa-Zapadna Bačka, South Backa-Južna Bačka, Srem and the city of Belgrade- Grad Beograd) had population increased while five others registered depopulation tendency. The highest depopulation rate had been recorded in the Borska oblast.

Picture 11. Population number in the Serbian part of Danube catchment area (1991-2008)



The negative population tendency continued after 2002 census, resulting 0.4% (16647) less population in 2008 than in 2002. All the NUTS3 counties were affected by the depopulation apart from the city of Belgrade and Juzna Backa county.

Picture 12. Population dynamics 2002-2008



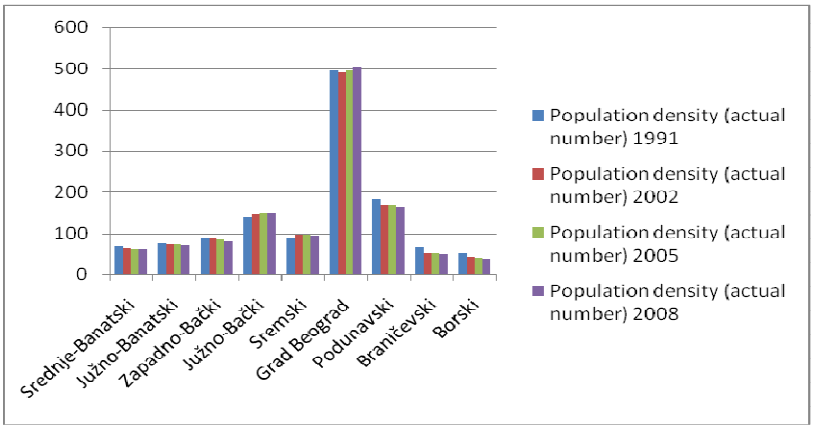
It is possible to estimate population by counties just in Vojvodina. Total population estimation of five counties in 2021 comparing to 2002 census data, shows decrease of 7.4%. Depopulation trend is going to affect all five counties and the most severe affect will record Zapadno backi county

5.1.2. Population density

The average population density in 2008 was 129 per sq. km that is above the national average. The average population density in Vojvodina is 92 per sq. km and in Central Serbia 96 per sq. km (considering just the plan area).

The density in the area is ranging from 38 per sq. km to 502 per sq. km. The counties with the high population density over 100 per sq. km are Juzna Backa county (151 per sq. km), the city of Belgrade (502 per sq. km) and Podunavlje county (164 per sq. km). The density in other counties is lower than the average in Vojvodina and Central Serbia (apatr from Srem county which is just above Vojvodina average). High density is obviously recorded in the counties with big and medium size urban anglomerations like Belgrade (national capital), Novi Sad (provincial capital), Smederevo (county center).

Picture 13. Population density in the Serbian part of Danube catchment area (1991-2008)

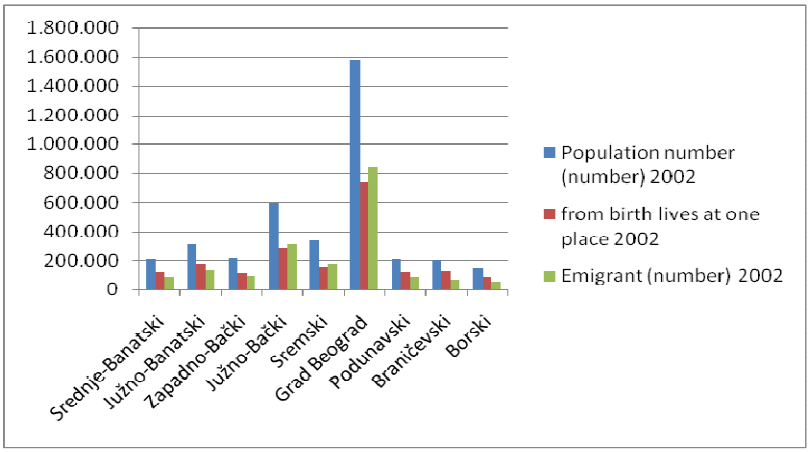


5.1.3. Demographic processes

Natural demographic tendencies show negative characteristics with the high mortality rate, low birth rate and negative population growth. Negative population growth affected all the counties in the plan area and the trend worsened in the 2002-2008 period. In that period just three county minimally increased population or remained on the same rate (Srednje Banatski, Južno Backi, and the city of Belgrade). In general the population growth rate for the period 2002-2008 in the area was between -1.7 ‰ (Južna Backa) to -11.6 ‰ (Branicevska). Excluding Juzna Backa county and the city of Belgrade the population growth rate in all other counties is significantly lower that the average national (-4.6 ‰). The extreme low rate is recorded in Zapadna Backa county, Bor and Branicevo county with less than -8 ‰.

The plan area has the transitive demographic characteristics which were especially notable in the last decade of 20th century (refuges from former Yugoslavian republics). Mechanical component influenced the demographic tendencies and decreased negative population growth rate. According to 2002 census the migrant population in the area was 49 % of total population. In three counties (Južna Backa, the city of Belgrade and Srem county) migrant population is greater than autochton population (over 50%). The highest rate of mehanical population influx occured in the 1991-2002 period.

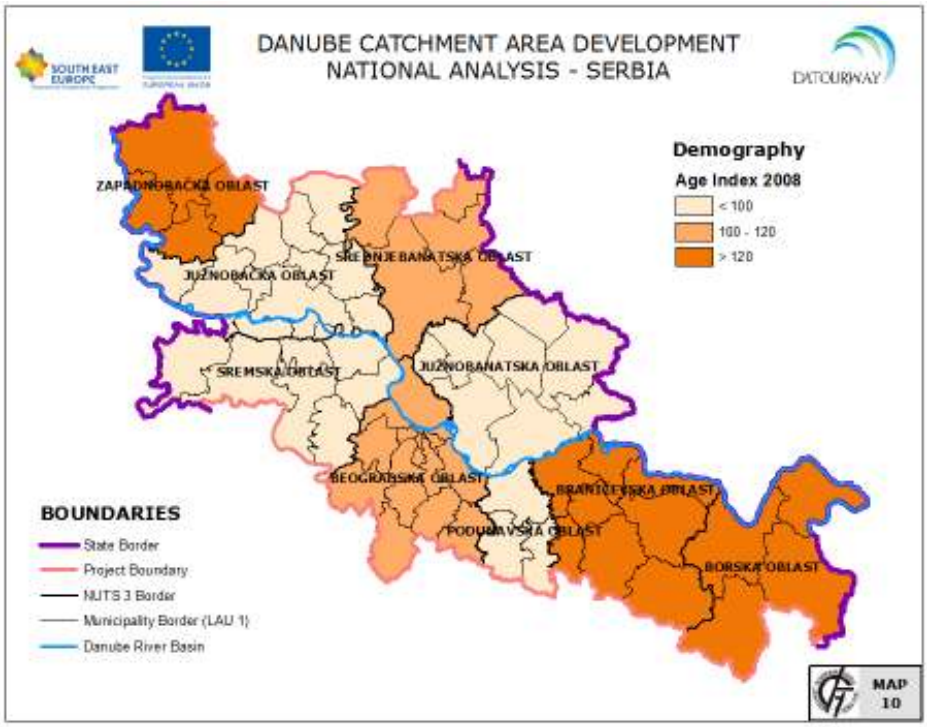
Picture 14. Migrations in the Serbian part of Danube catchment area (2002)



5.1.4. The population structure

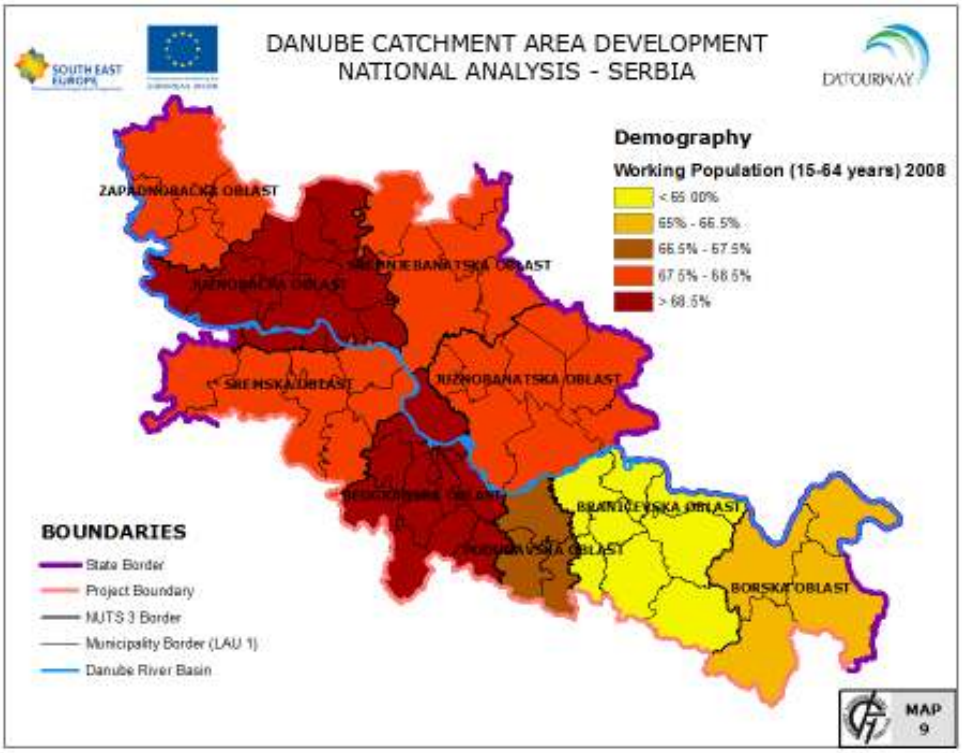
The population structure and its basic components are showing disappointing age structure of the population. Aging index has negative trend and it is set dramatically above the critical level. Population older than 60 is higher than the population of young from 0 to 19. Five out of nine counties has the higher aging index than the national average (105.9). Extremely high aging index is recorded in Branicevo county (120.8) and Bor county (123.7). The best age structure is in Juzna Backa (92.7) and Srem (93.8) counties.

Picture 15. Age index (2008)



Working population (women from the age of 15 to 59, man from the age of 15 to 64) in 2008 was 68.4% of total population. Only two counties have higher working population percent – Juzna Backa County and the city of Belgrade while the lowest is recorded in Branicevo (63%).

Picture 16. Working population 2008

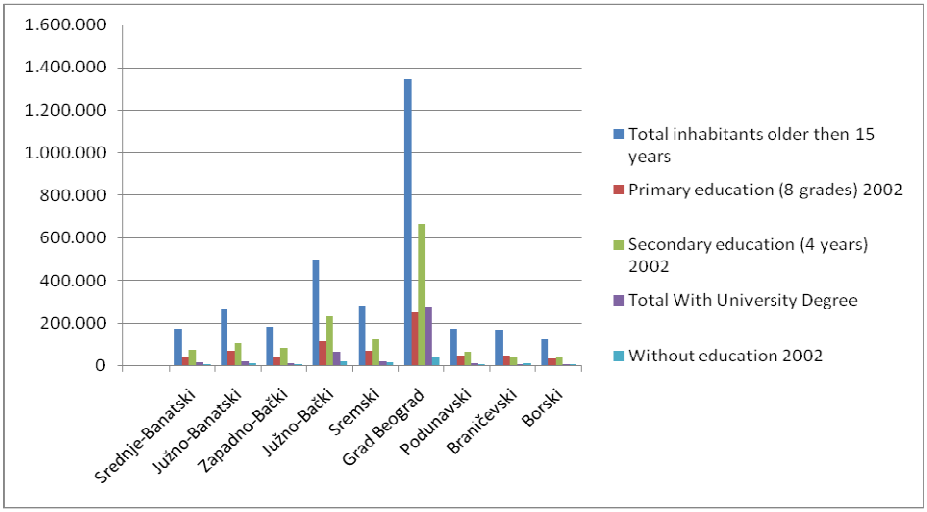


5.2. Social services and social infrastructure

5.2.1. Education structure

The education structure of the population has been analised on the basis of 2002 census. The education level of the population older than 15 has been considered (85.0% of population). 45% of the population holds a high school level degree, 25% have finished education on primary school level and 14% holds university degrees. In comparison to previous periods when primary school was the dominant education level, it has been recorded significant development of overall population education level. The education development tendency continued and the number of people with no formal education seriously dropped. However, the percent of population with no formal education is still rather high (17%). 47% of people above 15 in Juzna Backa county and 50.0% in the city of Belgrade have a high school degrees and 13% and 21% respectively hold university degrees. The counties which population predominantly has just primary school education is Podunavlje county (28.0%) and Branicevo county (29.0%). Branicevo and Bor counties measure above 30% of population with the age of above 15 with no formal education or not completed primary school.

Picture 17. Education structure the Serbian part of Danube catchment area (2002)



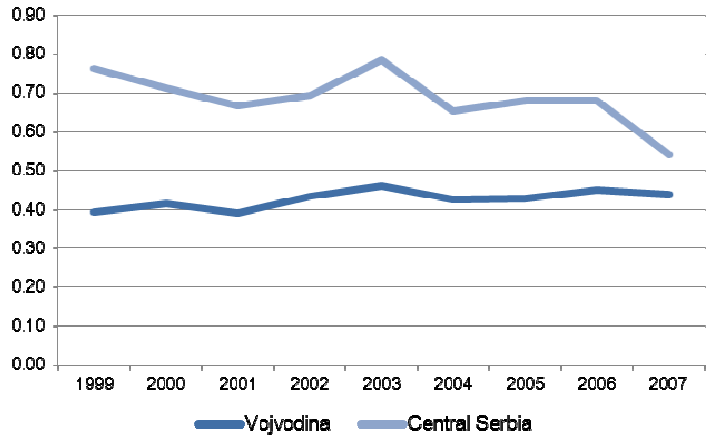
5.2.2. Research and development

Research and development are only beginning to be considered as an important economic activity and potential.

Differences between Vojvodina and Central Serbia are mainly a consequence of disproportional number of inhabitants, research institutions and budgets.

While the number of researchers in Central Serbia was decreasing from 1999 to 2002, in Vojvodina the number of personnel first increased and then decreased. The number of personnel again decreased in both counties after 2003 and increased after 2004.

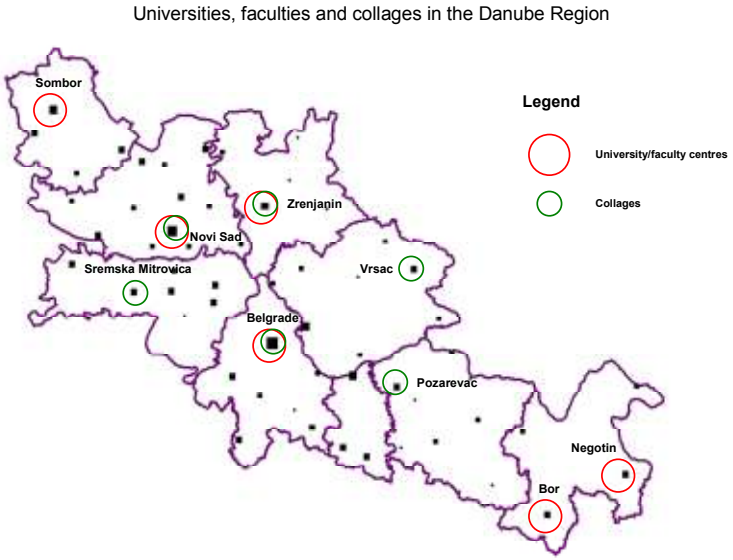
Picture 18. Total researchers (% of total employment) at NUTS2 level



Source: Statistical Office of Serbia University Centers

In the the Serbian part of Danube catchment area there are 2 universities -University of Belgrade and University of Novi Sad. The majority of education institutions is situated in the City of Belgrade, distribution of institutions being the following:

Picture 19. Geographical distribution of education centres



Source: Republic Agency for Spatial Planning

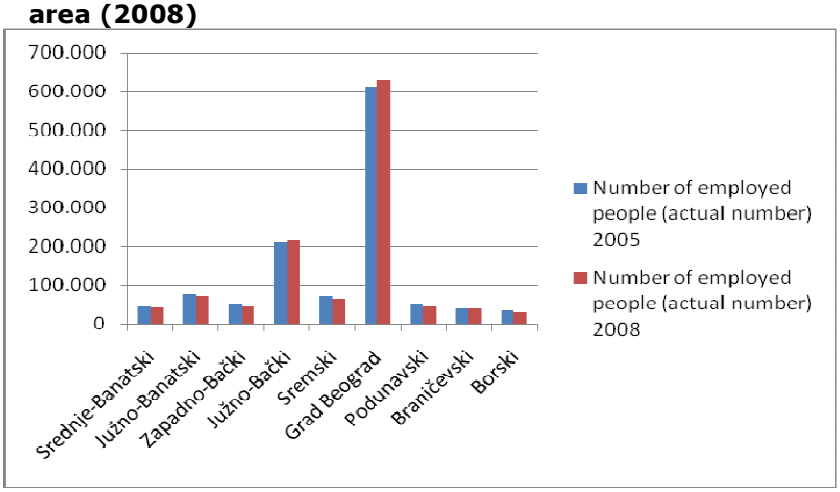
5.3. Workforce

Employment/unemployment

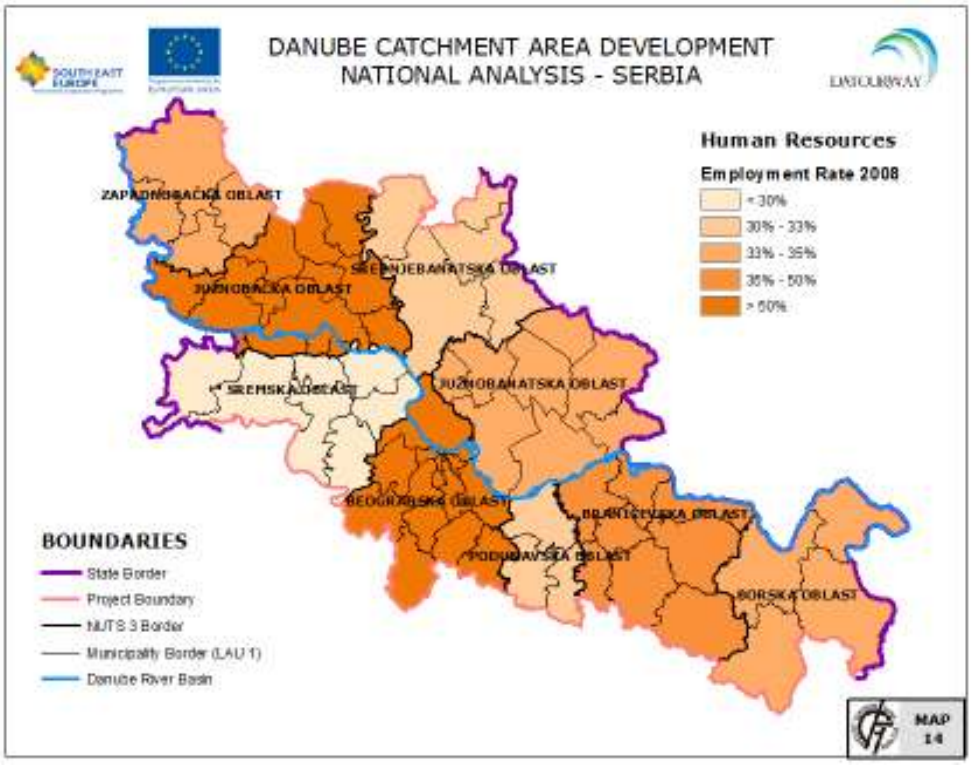
Total employed population (2008) in the the Serbian part of Danube catchment area was 1184792 or 63% of total national. Unemployed population on the same census (2008) was 298.812 or 40.0% of national unemployed population. Employment rate of the area is 46.0% and vary from 29% (Srem county) to 56% (the city of Belgrade).

Unemployment rate is 12% sliding from 9% (the city of Belgrade) to 16% (Zapadna Backa county). Total employed population in 2005-2008 period slightly decreased (0.2%), while unemployment dropped significantly (30%). Only in some counties the employment population is growing (Juzna Backa county, the city of Belgrade and slightly in Branicevo county).

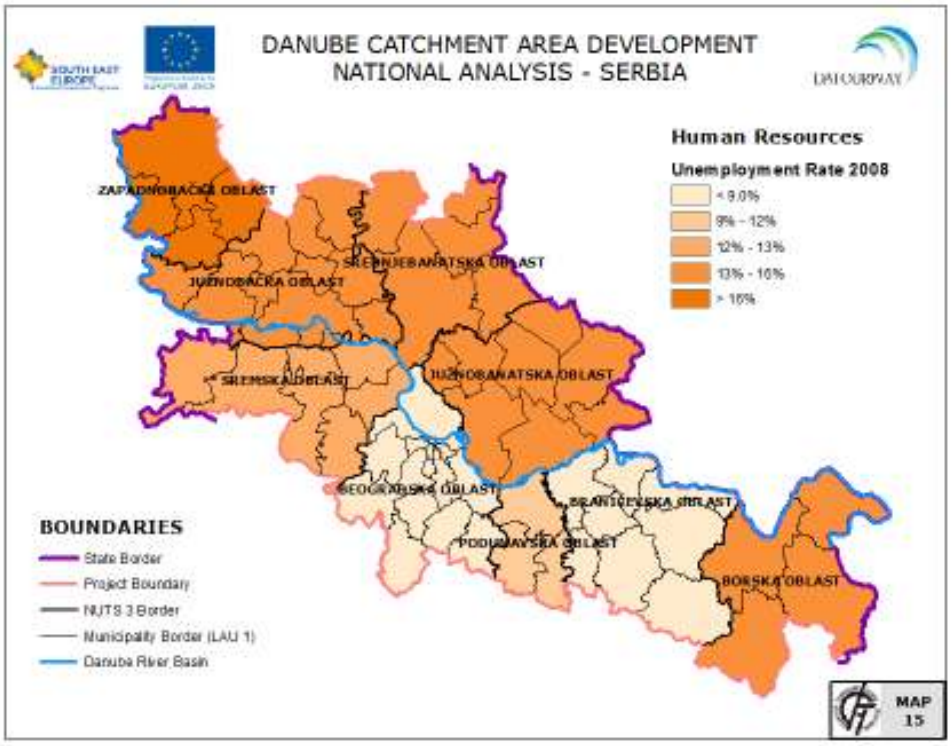
Picture 20. Number of employed people the Serbian part of Danube catchment area (2008)



Picture 21. Empoyment rate



Picture 22. Unemployment rate 2008



5.4. Education for tourism and catering trade in Datourway Area

According to data's (last available year is 2007) of the Statistical office of the Republic of Serbia (*Statistical yearbook 2009*), that the following network of education establishments in the The Serbian part of Danube catchment area (secondary schools, specialized classes in schools, auxiliary schools and faculties) prepare staff for work in trade, catering trade and tourism there is 101secondary school and 995 classes in whole Serbia.

The main educational centres are Belgrade and Novi Sad in The Serbian part of Danube catchment area. Belgrade has 4 universities, of which 2 are involved in education for trade, catering trade and tourism: University in Belgrade with Faculty of Economy, and Singidunum University with Faculty of tourism and hospitality management. In Novi Sad there is University of Novi Sad with Faculty of Sciences which has Department for tourism, geography and hotel management; Faculty of economy and Faculty for sport and tourism. High and higher schools for tourism, trade and catering trade are: The college of hotel management- Belgrade, Belgrade business school, The Higher Education school of tourism- Belgrade in The City of Belgrade county and The Higher education school of business and The Higher Education School of Marketing, trade and tourism in Novi Sad-Zapadno backi county.

In 2008, according to Statistical office of the Republic of Serbia (*Statistical yearbook 2009*) 7695 pupils have been finished regular secondary education for trade, tourism and catering trade fields of activities.

6. NATURAL ENDOWMENTS, STATE OF THE ENVIRONMENT

6.1. Natural resources

The The Serbian part of Danube catchment area is located in central Europe (the southern Pannonian Basin), and extends to the northern part of the Republic of Serbia.

This area is characterized by great complexity of the content, functions and activities giving specific polymorphic and poly-functional structure that cannot be found in other parts of the Republic of Serbia.

The area covered by the the Serbian part of Danube catchment area, the Spatial Plan for the Republic of Serbia defines as belonging to the different tourist areas and areas of national importance, the most notably the central zone with the tourist region of Đerdap and the Deliblato Sands (Deliblatska peščara) and the North Zone with the tourist region Fruška Gora, the Upper Danube Basin and the Lower Tisa Basin.

The Spatial Plan for the Republic of Serbia also determines transit tourist roads of international and national level with a large number of road routes on this level intersecting or touching the subject area. In terms of navigable waterways, in addition to the Danube being of international rank, major impact on this region comes from the rivers Tisa, Sava, Drina, Velika Morava, and the DTD hydro-system of canals.

A special attraction of the area is the presence of a large number of protected natural resources and areas with significant poly-functional structures in terms of tourism, such as Fruška Gora, Srem Karlovci, Novi Sad and Belgrade metropolitan area. It should also be noted that the The Serbian part of Danube catchment area consists of a great variety of content from the domain of industry, agriculture, energy, and a large number of settlements and infrastructure corridors, which are often in collision or direct conflict with the area's tourism potential.

Climate

Climatic characteristics of the area are a natural factor that significantly affects all aspects of tourism in the area in the context of its attractiveness.

Insolation

The The Serbian part of Danube catchment area is located in the mild continental belt; we can state it is characterized by relatively high insolation with an average of more than 2,000 hours per year for the entire area.

Temperature

The air temperature is very important for evaluation of hydrographic motifs. Air temperatures during the summer months with values exceeding 20° C play an important role coupled with water temperature above 18° C, which determines the length of the swimming season.

Wind

Wind has a great tourist value, which is reflected in several key facts:
- Wind reduces high temperatures in the coastal part of various hydrographic objects,
- Low intensity wind favors sailing sports
- Strong wind can significantly hinder navigation on rivers (e.g. strong southeastern wind *Košava* along the Danube in some sectors).

During the period observed, the main number of days with strong wind ranges from 4.3 (Meteorological Station Pancevo) to 10.6 (meteorological station Sombor). These days are generally the most common in late fall and early spring (in the Sombor area) and in winter (the north wind) and coincide with the period when the most common form of wind observed in the field is Košava. In the remaining period, moderate winds prevail, so that different types of tourism are possible throughout most of the year.

Sky Conditions

Sky condition is an important climatic element with respect to direct dependence on insolation, which is highly important for some forms of tourism (recreation, swimming).

Comparison between spring and autumn months leads to conclusion that autumn skies are much clearer than skies in spring.

Precipitation

Precipitation is very important climatic element, its value affecting the characteristics of a given area (maintenance of hydrographic objects, vegetation). As for the impact of rainfall on the development of certain forms of tourism, especially swimming, sports and recreation, more important are the days without precipitation.

The highest rainfall in the area covered by this study occurs in July (from 77 to 92 mm), and then in May and June. The least amount of rainfall occurs in winter, and spring is on average characterized by higher level of precipitation.

Total annual rainfall ranges from 580 to 670 mm during the year and these amounts correspond to the formation primarily of steppe vegetation (which is now cultivated) in the subject area.

6.2. Areas Protected by National Law

Protected areas presented in this text are those designated by the Low on the protection of nature (Official Journal of the Republic Serbia n°36/09). The Law defines seven types of protected areas, namely:

1. national parks,
2. natural parks,
3. landscapes of extraordinary importance,
4. rigorous natural reserves,
5. special natural reserves,
6. natural monuments,
7. protected habitats.

Serbian part of Danube catchment area there are 11 vast (with surface above 1,000 ha) and 174 small protected areas (with surface below 1,000 ha).

Large protected areas include 2 national parks, 7 special natural reserves, 1 natural monument and 1 landscape of extraordinary importance, the total surface being 196,331 ha. These areas are spread over eight counties (City of Belgrade, Zapadnobacki, Juznobacki, Srednjebanatski, Juznobanatski, Sremski, Branicevski and Borski county).

Table 2: Overview of the large-extension protected areas in the Serbian part of Danube catchment area

Name of present large-extension protected areas	Area (ha)	Year of state	NUTS 3								
			Zapadnobačka oblast	Južnobačka oblast	Srednjebanatska oblast	Južnobanatska oblast	Sremska oblast	City of Belgrade	Podunavska oblast	Braničevska oblast	Borska oblast
National Park Fruška Gora**	25,393	1960		x			x				
National Park Đjerdap*	63,608	1974								x	x
Natural Monument Lazarev kanjon*	1,755	2000									x
Special Nature Reserve Delibatska peščara**	34,829	1965				x					
Special Nature Reserve Gornje Podunavlje **	19,648	1982	x								
Special Nature Reserve Karađorđevo**	2,955	1997		x							
Special Nature Reserve Koviljsko-Petrovaradinski rit **	4,840	1998		x			x				
Special Nature Reserve Obedska Bara **	9,820 (19,611 buffer zone)	1968					x				
Special Nature Reserve Zasavica**	1,150	1997					x				
Special Nature Reserve Stari Begej-Carska Bara **	1,676 (7,532 buffer zone)	1986			x						
Landscape of extraordinary importance Kosmaj*	3,514	2005						x			

Source: *Register of protected natural assets, Institute for Nature Conservation of Serbia, 2010
** Regional Spatial Plan of Vojvodina, Draft, ITPV, 2010

All large protected areas are within I category of protection, the exceptions being Special Natural reserve Kardjordjevo that is within II category and Landscape of extraordinary importance Kosmaj within III category.

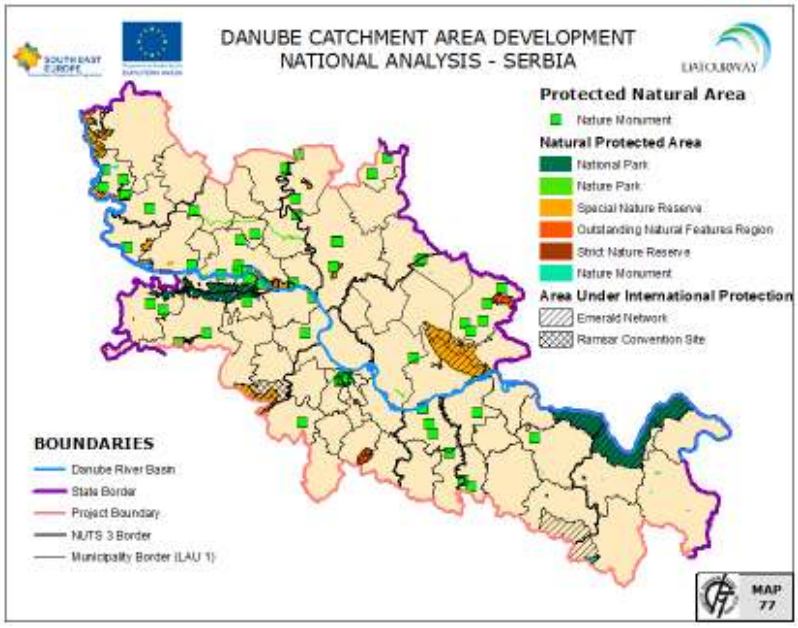
The biggest number of small-scale protected areas (under 1,000 ha) can be found in Juznobacki County, and they are shown only for the territory of AP of Vojvodina (Source: Regional Spatial Plan of Vojvodina, ITPV,2010). For counties in Serbia, data Source is Institute for Nature Conservation of Serbia.

Table 3: Overview of the small-extension protected areas in the Serbian part of Danube catchment area

NUTS 3/number of areas	***Category of the Protected area***				
	Natural park	**Landscape of extraordinary importance**	**Natural reserve**	**Natural monument**	**Other**
Zapadnobački (8)				8	
Južnobački (33)	4		3	25	1
Srednjebanatski (12)	1		2	9	
Južnobanatski (17)	1	1	2	13	
Sremski (16)			9	7	
City of Belgrade (37)		3		24	
Podunavski (12)				7	2
Braničevski (14)			2	11	
Borski (10)			3	4	
Total area (174)	**6**	**4**	**21**	**108**	**3**

Note: *Natural park*: nature parks and regional nature parks; *Landscape of extraordinary importance*: landscapes of extraordinary importance and landscapes of particular natural beauty; *Natural reserve*: rigorous, special, general, scientific/research natural reserves and reserves for maintenance of genetic fond; *Natural monument*: natural monuments, monuments of nature, monuments of garden architecture and forest parks; *Other*: memorial natural monuments and natural areas around cultural heritage sites.

Picture 23. Protected natural areas the Serbian part of Danube catchment area



6.3. Sites with international significance

Emerald Network

Activities on identification areas for Natura 2000 ecological networks (SPA and SAC) have started.

In the Serbian part of Danube catchment area, 22 areas were included in the EMERALD network that establishes areas that are important for implementing Bern Convention (The Convention on the Conservation of European Wildlife and Natural Habitats - Bern, 1979). Areas within EMERALD network (EMERALD network of Areas of Special Conservation Interest - ASCI) have total surface of 215,271.15 ha.

Table 4: Overview of the EMERALD Areas of Special Conservation Interest on the territory of Serbia (ASCI) in the Serbian part of Danube catchment area

Number	NUTS 3	Name	Code	Area (ha)
1.	Zapadnobacki	Gornje Podunavlje	RS0000001	**19,38**
2.	Sremski	Obedska Bara	RS0000003	**9,86**
3.	Juznobanatski	Deliblatska peščara	RS0000005	**35,84**
4.	Sremski and Juznobacki	Fruška gora	RS0000007	**25393,00**
5.	Srednjebanatski	Slano kopovo	RS0000010	**976,45**
6.	Branicevski and Borski	Đerdap	RS0000012	**63608,45**
7.	Sremski and Macvanski*	Zasavica	RS0000014	**670,99**
8.	Juznobanatski	Vršačke planine	RS0000017	**4408,00**
9.	Sremski and Juznobacki	Koviljsko-Petrovaradinski rit	RS0000021	**4840,61**
10.	Srednjebanatski	Stari Begej-Carska bara	RS0000024	**1676,00**
11.	Juznobacki	Karađorđevo	RS0000038	**2955,33**
12.	Borski	Felješana	RS0000041	**15,28**
13.	Borski	Mustafa	RS0000042	**79,64**
14.	Borski and Zajecarski*	Lazarev kanjon	RS0000043	**1755,00**
15.	Podunavski	Šalinački lug	RS0000045	**19,22**
16.	Branicevski	Klisura Osaničke reke	RS0000050	**30,44**
17.	Juznobacki	Tikvara	RS0000053	**508,14**
18.	Braničevski, Borski and Zajecarski*	Kučajske planine	RS0000055	**103108,90**
19.	Juznobanatski	Pančevačke ade	RS0000056	**1141,13**
20.	City of Belgrade	Avala	RS0000058	**489,13**
21.	City of Belgrade	Kosmaj	RS0000059	**3514,50**
22.	**Branicevski**	**Busovata**	**RS0000061**	**15,86**

* out of the DONAUREGIONEN+ area

Source: Institute for nature conservation of Serbia, 2009

EMERALD Network is network that establishes Areas of Special Conservation Interest – ASCI and that are important for implementation of the Bern Convention. EMERALD Network in Serbia includes 61 areas covering 11.5% of national territory (1,019,270 ha). In the Danube area, 22 areas with total surface of 215,271.15 ha are included in EMERALD Network. Areas under EMERALD Network will be a basis for establishment of a national ecological network and NATURA 2000.

Areas registered as Ramsar Convention Sites

In the Serbian part of Danube catchment area there, are 6 areas protected according to the Ramsar Convention, their total surface being 48,370 ha. Two Ramsar areas are situated in Sremski county (Obedska Bara and Zasavica), 2 in Srednjebanatski County (Stari Begej-Carska Bara and Slano Kopovo), 1 in Juznobanatski County (Labudovo okno) and 1 in Zapadnobacki County (Gornje Podunavlje/Upper Danube).

Table 5: Overview of the protected areas based on the Ramsar Convention in the Serbian part of Danube catchment area

NUTS 3	Name of the area	Year	Area (ha)
Sremski	Special Nature Reserve Obedska Bara	1977	17,501
Srednjebanatski	Special Nature Reserve Stari Begej-Carska Bara	1996	1,767
Srednjebanatski	Special Nature Reserve Slano Kopovo	2004	976
Južnobanatski	Special Nature Reserve Labudovo okno	2006	3,733
Zapadnobacki	Special Nature Reserve Gornje Podunavlje	2007	22,480
Sremski	Special Nature Reserve Zasavica	2008	1,913
Total area			**48,370**

Source: http://www.ramsar.org/, 2010

6.4. Environment

The environmental quality of the area has greater weight together with the quality and attractiveness of tourist resources and the necessary infrastructure. This holds true for eco and the other types of tourism.

The exhaust fumes emitted into the air come from various sources such as energy and industrial polluters (enterprises), transport, households, etc.

Data on SO_2, smoke and NO_x immissions[1] in 2009. are presented in the following table:

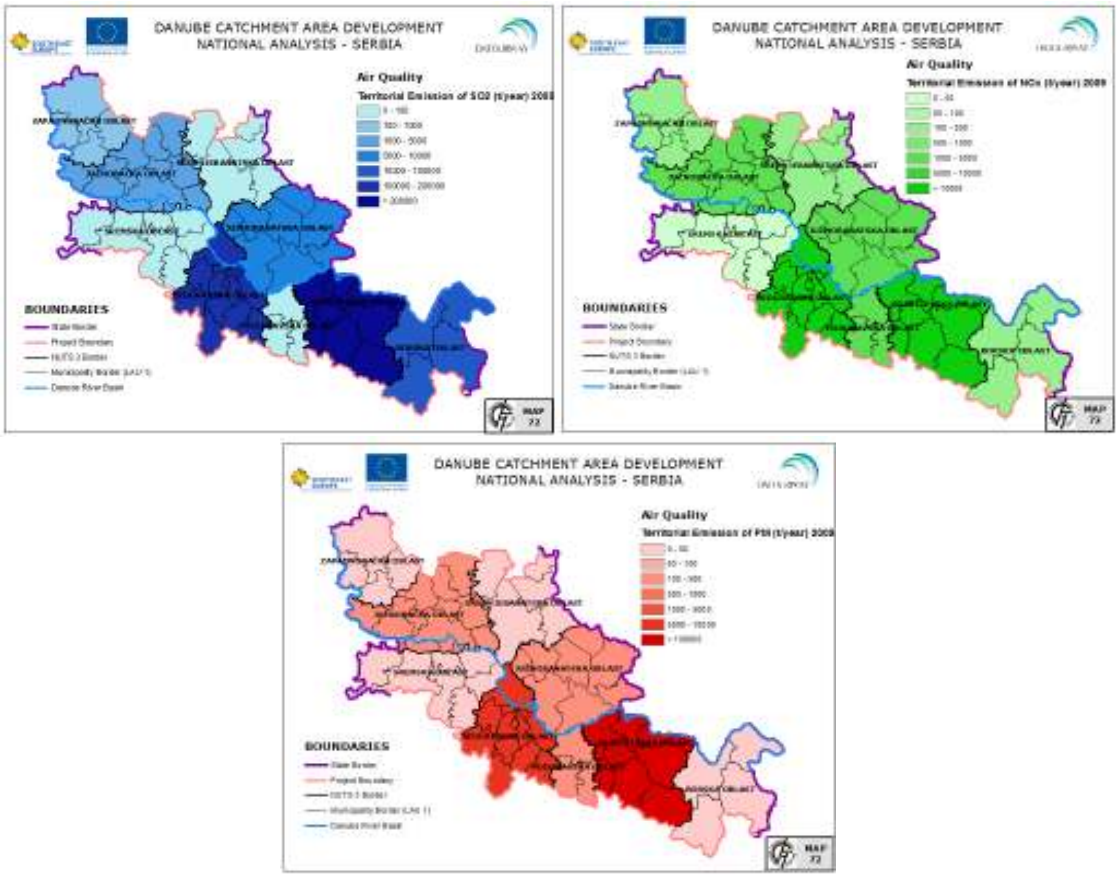
Table 6: Emissions of the elementary air pollutants according to the Serbian part of Danube catchment area

NUTS III	PM	SO_2	NO_x
	t/god	t/god	t/god
Severnobacki County	0,0778	28,448	214,4817
Zapadnobacka County	53,1685	213,964	186,0339
Juznobacki County	298,476	1574,274	4960,2678
Severnobanatski County	29,908	4,1171	1,855
Srednjebanatski County	46,0482	40,632	755,472
Juznobanatski County	348,5934	5006,623	3652,70
Sremski County	8.626	89,6840	37.952
City if Belgrade	9649,4376	168442.96	43595,754
Podunavski	310,187	0	1256.886
Branicevski County	14251,82	26144.88	23991.98
Borski County	33,5488	69801.624	285,375

Source: Environmental Protection Agency,2010.

[1] According to the Law on the protection of environment (*Official Journal of the Republic of Serbia nº 135/04*), **immission** implies concentration of polluting agents and an energy level in the environment, expressing quality of the environment of a specific area in a specific moment.

Picture 24. Data on emissions of NO_x, PM and SO_2 and in the Serbian part of Danube catchment area in tons per year and their relative share in the total emissions in Serbia (2009):



6.5.Water management

According to the Regulation on water classification (*Official Journal of the Socialist Republic of Serbia n ° 5/68),* there exist following water classes exist in Serbia: I, IIa, IIb, III and IV, as well as OC (out of class)[2].

State of the surface water quality (quality of the rivers) in 2008 in the Danube area is presented in the following table:

[2] Regulation on water classification makes distinction between four classes of water quality, according to their level of contamination and their use:
class I – waters which in their natural state or after disinfection could be used for providing drinking water to the settlements, within the food industry and for breeding noble fish species (salmonidae family);
class II – waters which are convenient for bathing, recreation and water sports, for breeding less noble fish species (cyprinidae family), as well as for providing drinking water to the settlements and food industry after being properly treated (coagulation, filtration and disinfection);
class III – waters which can be used for irrigation and in industries, except food production;
class IV – waters which can be used only after a special treatment; as well as
OC (out of classes).
There are two sub-lasses within the water class II: ***sub-class IIa***, including waters which, after a regular treatment (coagulation, filtration and disinfection) can be used for providing drinking water to the settlements, for bathing and for the production of food and ***sub-class IIb***, including waters which can be used for water sports, recreation, for breeding less noble fish species (cyprinidae family) and as drinking water for the cattle. Division of water into classes and sub-classes has been performed according to different indicators and their limit values, defined by this Regulation.

Table 7: Quality classes of the rivers in the Serbian part of Danube catchment area 2008

Name of the metering station	River	Dissolved oxygen	Oxygen saturation percentage	BOD5*	COD**	Saprobic index	Total Coliform bacteria	Suspended matter	Total dissolved dry matter	pH	Floating materials	Colour	Smell	Real class	Demanded class
Bezdan	Danube	II	II	II	I	II	IV	II	I	II	I	I	I	III	II
Bogojevo	Danube	II	IV	III	I	II	III	III	II	II	I	I	I	III	II
Bačka Palanka	Danube	II	III	II	I	II	IV	III	I	I	I	I	I	III	II
Novi Sad	Danube	II	IV	III	I	II	II	III	I	II	I	I	I	III	II
Slankamen	Danube	II	OC	III	I	-	-	III	I	II	I	I	I	-	II
Čenta	Danube	II	OC	III	I	-	-	III	I	II	I	I	I	-	II
Zemun	Danube	II	III	III	I	II	III	III	II	II	I	I	I	III	II
Pančevo	Danube	II	II	II	I	II	III	OC	I	II	I	I	I	III	II
Beograd-Vinča	Danube	II	III	II	I	II	III	III	I	I	I	I	I	III	II
Smederevo	Danube	II	III	II	I	II	III	III	I	II	I	I	I	III	II
Banatska Palanka	Danube	II	II	II	I	II	III	III	I	I	I	I	I	III	II
Veliko Gradište	Danube	II	II	II	I	II	II	III	I	I	I	I	I	II/III	II
Dobra	Danube	II	II	II	I	II	II	III	I	I	I	I	I	II/III	II
Tekija	Danube	II	II	II	I	II	II	II	I	I	I	I	I	II/III	II
Brza Palanka	Danube	II	II	II	I	II	-	II	I	I	I	I	I	II/III	II
Radujevac	Danube	II	II	II	I	II	II	II	I	I	I	I	I	II/III	II
Novi Bečej	Tisa	II	II	II	III	II	III	OC	I	I	I	I	I	III	II
Titel	Tisa	III	III	II	II	II	III	OC	I	I	I	I	I	III/IV	II
Bački Breg	Bajski canal	II	OC	III	I	II	III	II	II	II	I	I	I	III/IV	-
Bački Breg	Plazović	IV	IV	II	III	II	II	II	II	II	I	I	I	III/IV	-
Jamena	Sava	II	III	II	I	II	II	IV	II	I	I	I	I	III	II
Sremska Mitrovica	Sava	II	III	II	I	II	II	III	II	I	I	I	I	II/III	II
Ostružnica	Sava	II	IV	II	I	II	III	III	I	I	I	I	I	III	II
Batrovci	Bosut	II	OC	IV	III	II	II	II	II	III	I	I	I	IV	III
Morović	Studva	I	OC	IV	III	II	II	III	II	IV	I	I	I	IV	-
Hetin	Stari Begej	OC	IV	III	III	II	II	III	II	II	I	I	I	IV	-
Srpski Itebej	Plovni Begej	OC	OC	IV	II	III	IV	III	I	I	I	I	I	OC	III
Klek	Plovni Begej	III	III	III	I	-	IV	III	I	I	I	I	I	IV	IIA
Stajićevo	Plovni Begej	OC	IV	IV	I	-	IV	III	I	I	I	I	I	OC	IIB
Jaša Tomić	Tamiš	II	III	II	I	II	IV	III	II	I	I	I	I	III/IV	II
Pančevo	Tamiš	III	OC	III	I	II	IV	III	I	I	I	I	I	IV	II
Markovićevo	Brzava	II	II	II	I	II	IV	III	I	I	I	I	I	III	IIA
Vatin	Moravica	III	OC	III	III	II	II	III	II	II	I	I	I	III/IV	II
Dobričevo	Karaš	II	II	III	III	II	III	OC	I	I	I	I	I	III/IV	II
Kusić	Nera	I	II	II	I	II	II	III	I	II	I	I	I	III	II
Mali Iđoš	Krivaja	IV	IV	OC	III	-	-	III	II	II	I	I	I	-	IIB
Srbobran	Krivaja	OC	OC	IV	IV	II	II	III	II	II	I	I	I	OC	IIB

Sombor	DTD***	IV	IV	III	I	II	II	II	II	I	I	I	I	III/IV	IIA
Mali Stapar	DTD	II	IV	II	I	-	-	II	II	II	I	I	I	-	IIA
Vrbas 1	DTD	II	OC	III	II	II	II	II	II	II	I	I	I	III	IIB
Vrbas 2	DTD	OC	OC	OC	OC	III	IV	III	II	I	I	I	I	OC	IIB
Srpski Miletić	DTD	II	OC	III	I	II	II	III	I	III	I	I	I	III	IIA
Bačko Gradište	DTD	IV	OC	OC	III	II	II	III	II	III	I	I	I	OC	IIB
Novi Sad 1	DTD	III	OC	IV	I	II	IV	III	II	II	I	I	I	IV	IIA
Bač	DTD	OC	OC	III	I	II	II	II	II	I	I	I	I	IV	IIA
Bački Petrovac	DTD	III	OC	IV	II	II	II	II	II	II	I	I	I	IV	IIA
Žabalj 1	Jegrička	III	III	IV	III	II	II	III	II	III	I	I	I	III/IV	IIB
Melenci	DTD	III	III	III	II	II	IV	III	II	I	I	I	I	IV	-
Kajtasovo	DTD	II	OC	III	I	II	III	III	I	I	I	I	I	III/IV	IIB
Draževac	Kolubara	II	II	II	I	II	II	IV	II	I	I	III	I	II/III	IIB
Rakovica	Topčiderska river	III	OC	III	III	III	III	OC	II	III	OC	III	III	OC	-
Ljubičevski Most	Velika Morava	III	OC	III	I	II	II	II	II	I	I	III	I	III/IV	IIA
Kusiće	Pek	I	II	II	I	II	II	III	II	I	I	I	I	II/III	III
Mosna	Porečka	I	II	II	I	II	III	OC	II	I	I	III	I	III	IIA

* BOD5 - Biochemical Oxygen Demand
** COD - Chemical Oxygen Demand
*** DTD – Danube-Tisa-Danube Canal
Source: Republic Hydrometeorological Service of Serbia, Hydrological yearbook 3.

6.6. Water quality in 2008

As it can be observed from the table, water quality class of the Danube when it enters Serbia from Hungary is III, while its quality at the exit, when it enters Romania and Bulgaria, is in class II/III.

Water quality assessment of accumulations (artificial lakes) is being practiced at three points on the surface (at the dam, in the middle and at the beginning of lake) as well as along its depth (surface, middle depth and bottom).

The monitoring of ground water regime is being performed in five areas (Velika Morava, Kolubara, Backa, Banat and Srem). When evaluating the quality of ground waters situated along riversides a special attention is given to dangerous and harmful materials that have previously been detected in the rivers.

Table 8: Ground water quality in the Serbian part of Danube catchment area 2008

Area	Ground water quality
Velika Morava	In water samples taken from several piozimeters situated along the riverside of Velika Morava, following high values were detected: total dissolved salts (class III/IV), suspended particles (class III) and NO_3-N (class III/IV to OC). High values of dangerous and harmful materials, such as dissolved manganese (Mn) and Chromium (Cr) were also detected (the later in one assessment).
Kolubara	One assessment, done on samples taken from piozimeters situated in Posavina and riverside of Kolubara river, showed increased values of suspended materials (class III) and oil hydrocarbons (class III/IV). As far as dangerous and harmful materials are concerned, an increased value of dissolved manganese (Mn) was detected.
Backa	In water samples taken from piozimeters situated in Backa increased values observed include suspended materials (class III) and dangerous and harmful materials such as dissolved manganese (Mn).
Banat	In water samples taken from some piozimeters situated in Banat increased values observed include suspended materials (class III/IV), total dissolved salts (class III/IV) and sulphides (class III/IV). Among dangerous and harmful materials increased values refer to dissolved iron (Fe) (class III/IV), dissolved zinc (Zn) (class III/IV), arsenic (As) (OC state) and dissolved manganese (Mn).
Srem	In water samples taken from some piozimeters situated in Srem, increased values of free ammonia (NH3-N) (class III/IV). nitrate nitrogen (NO_3-N) (III/IV water quality class) and manganese (Mn). Among dangerous and harmful materials, increased values refer to dissolved (Zn) (class III/IV) and manganese. (Mn).

Source: Republic Hydrometeorological Service of Serbia, Hydrological yearbook 3, Water quality in 2008

The new Law on waters (Official Journal of the Republic of Serbia n° 30/2010) is harmonised with the Water Framework Directive (2000/60/EC) as the basic framework for water management in the EU member states.

There are nine regional water supply systems planned to be established in the Danube Area: Timocki, Mlavsko-moravski, Kolubarski, Savsko-beogradski, Sremski, Novosadski, Backi, Gornja Tisa and Juznobanatski[3]. The regional water supply systems cover 9.33% of the the Serbian part of Danube catchment area. Their share is the highest in Branicevski County (4.25% of the Danube area territory) and the lowest in Juznobacki (0.13% of the Danube area territory).

In order to operate the regional water supply systems in the Danube area, there exist 3 artificial lakes (Grliste, Rovni and Sava lake-WPI[4] Makis) and 8 more are planned to be created (Bogovina, Zukovac, Okoliste,Vitman and Gradac, Kucevo, Dubocica, Ribnica and Gornja Ljubovidja).

Underground water sources are the biggest provider of water for households and industry. In Vojvodina, underground water sources are the only sources of water supply[5].

The capacity of underground water sources (Q) above 1000 l/s can be found in three counties (City of Belgrade - 5946 l/s, Juznobacki County - 1634 l/s and Juznobanatski County - 1004 l/s). the capacity of underground water sources (Q) from 500 to 1000 l/s can be found in 5 counties (Zapadnobacki - 627 l/s, Srednjebanatski - 648 l/s, Sremski - 796 l/s, Podunavski - 730 l/s and Braničevski - 620 l/s) whereas in one county the capacity is under 500 l/s (Borski County - 215 l/s).

6.7. The waste water removal and waste water treatment

As for the capturing, drainage and purification of water concerns, it can be said that the situation in this aspect is the most unfavorable. Almost no settlement along the Danube bank has a complete sewage system (together with facilities for waste water treatment).

The following table shows data on the number of dwellings connected to sewage and water supply system

Table 9: Number of dwellings connected to sewage and water supply system (2002) in the the Serbian part of Danube catchment area

Nuts III name	LAU1 name	Year	Number of of dwellings/flats	Number of dwellings connected to the water pipelines	Number of dwellings connected to the sewage systems
City of Belgrade	Barajevo	2002	9273	5845	612
City of Belgrade	Vozdovac	2002	58761	54877	45840
City of Belgrade	Vracar	2002	28214	28085	27800
City of Belgrade	Grocka	2002	29453	21773	2879
City of Belgrade	Zvezdara	2002	52195	51679	48421

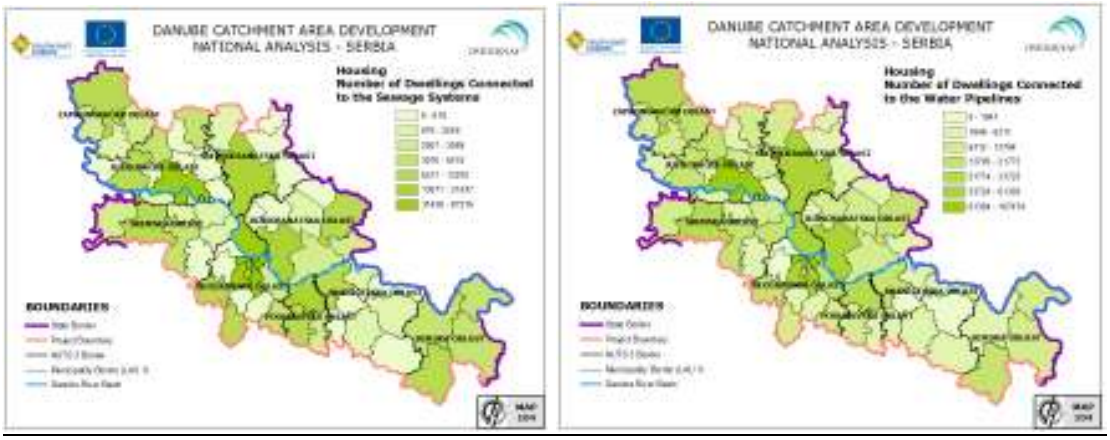
[3] Water Management Strategy of Serbia, O.J. of the RS, n° 11/02
[4] WPI-water purification installation
[5] Report on state of environment in the Republic of Serbia 2005, Ministry of Science and Environment – Agency for Environmental Protection, Belgrade, 2006

City of Belgrade	Zemun	2002	187044		
City of Belgrade	Lazarevac	2002	19878	13538	7578
City of Belgrade	Mladenovac	2002	17291	9553	6516
City of Belgrade	Novi Beograd	2002	78324	78191	76583
City of Belgrade	Obrenovac	2002	24612	17040	8105
City of Belgrade	Palilula	2002	57233	56068	43298
City of Belgrade	Rakovica	2002	33880	33723	31437
City of Belgrade	Savski Venac	2002	18235	18141	17575
City of Belgrade	Sopot	2002	7389	3559	678
City of Belgrade	Stari grad	2002	26900	26790	26700
City of Belgrade	Surcin	2002	11464		
City of Belgrade	Cukarica	2002	61903	61303	49977
Srednjebanatski	Zitiste	2002	8271	2472	0
Srednjebanatski	Zrenjanin	2002	49160	46165	21104
Srednjebanatski	Nova Crnja	2002	5295	4834	0
Srednjebanatski	Novi Becej	2002	10302	9708	1389
Srednjebanatski	Secanj	2002	6465	4727	231
Juznobanatski	Alibunar	2002	8874	8291	2056
Juznobanatski	Bela Crkva	2002	7949	5820	3014
Juznobanatski	Vrsac	2002	20584	18371	9076
Juznobanatski	Kovacica	2002	10762	9115	0
Juznobanatski	Kovin	2002	13045	9535	2867
Juznobanatski	Opovo	2002	3989	3550	250
Juznobanatski	Pancevo	2002	44952	42854	21923
Juznobanatski	Plandiste	2002	5205	3710	405
Zapadnobacki	Apatin	2002	11919	10964	2414

Zapadnobacki	Kula	2002	17150	16562	2733
Zapadnobacki	Odzaci	2002	12941	12265	1517
Zapadnobacki	Sombor	2002	35621	32453	10281
Juznobacki	Bac	2002	6196	5389	496
Juznobacki	Backa Palanka	2002	20918	20095	8987
Juznobacki	Backi Petrovac	2002	5931	5417	0
Juznobacki	Beocin	2002	5796	4589	1547
Juznobacki	Becej	2002	16470	11798	4018
Juznobacki	Vrbas	2002	15185	14604	3875
Juznobacki	Zabalj	2002	9307	8730	0
Juznobacki	Novi Sad - city	2002	114030	107474	87216
Juznobacki	Srbobran	2002	6877	6311	195
Juznobacki	Sremski Karlovci	2002	3201	2839	2385
Juznobacki	Temerin	2002	9380	8772	0
Juznobacki	Titel	2002	5891	3183	350
Sremski	Indjija	2002	16086	13794	1312
Sremski	Irig	2002	4817	3025	907
Sremski	Pecinci	2002	7054	5911	264
Sremski	Ruma	2002	19965	17582	4902
Sremski	Sremska Mitrovica	2002	29391	25553	9812
Sremski	Stara Pazova	2002	21175	18841	1945
Sremski	Sid	2002	13769	11319	2918
Podunavski	Velika Plana	2002	15667	5564	3069
Podunavski	Smederevo	2002	38019	26018	18691
Podunavski	Smederevska Palanka	2002	20757	9747	7658

Branicevski	Veliko Gradiste	2002	8061	3469	1536
Branicevski	Golubac	2002	3985	2748	675
Branicevski	Zabari	2002	5928	2839	0
Branicevski	Zagubica	2002	6090	3864	0
Branicevski	Kucevo	2002	8343	1847	1491
Branicevski	Malo Crnice	2002	5429	248	0
Branicevski	Petrovac	2002	13666	5200	2032
Branicevski	Pozarevac	2002	27587	19760	12337
Borski	Bor	2002	20301	16457	13070
Borski	Kladovo	2002	11458	9356	4018
Borski	Majdanpek	2002	9703	5386	4907
Borski	Negotin	2002	20190	11705	4786

Picture 25. Number of dwellings conected to sewage system (a)/ water pipelines (b)



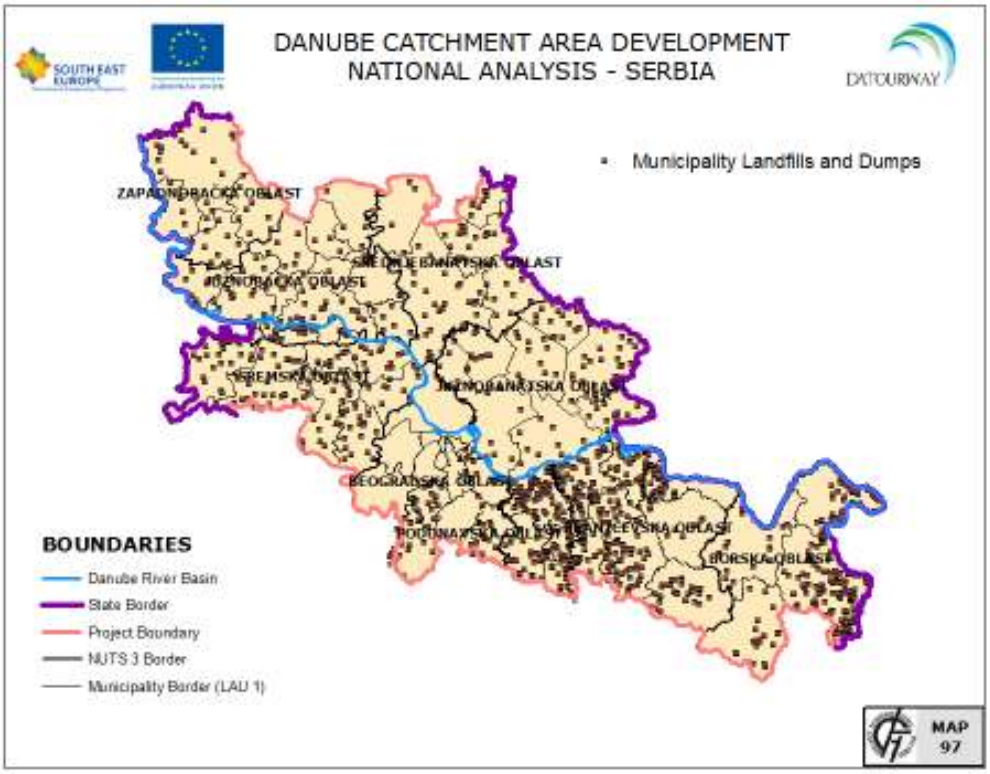
6.8. Waste management

Solving waste management issues is one of the most serious environmental challenges. Considerable volumes of municipal solid waste are generated in the The Serbian part of Danube catchment area.

According to the Waste Management Strategy of the Republic of Serbia for the period 2010-2019.,[6] there are 59 **landfills for communal waste** within the Danube area.

[6] Waste Management Strategy of the Republic of Serbia for the period 2010-2019, (*Official Journal of the Republic of Serbia n* ° 29/2010)

Picture 26. Municipal landfills and dumps in the Serbian part of Danube catchment area



Data on communal waste amounts that are generated at NUTS4 (municipal) level are incomplete and unreliable[7]. Estimated amounts of communal waste produced on yearly basis in the the Serbian part of Danube catchment area[8] are:

Table 10: Estimated amounts of communal waste per year in the the Serbian part of Danube catchment area

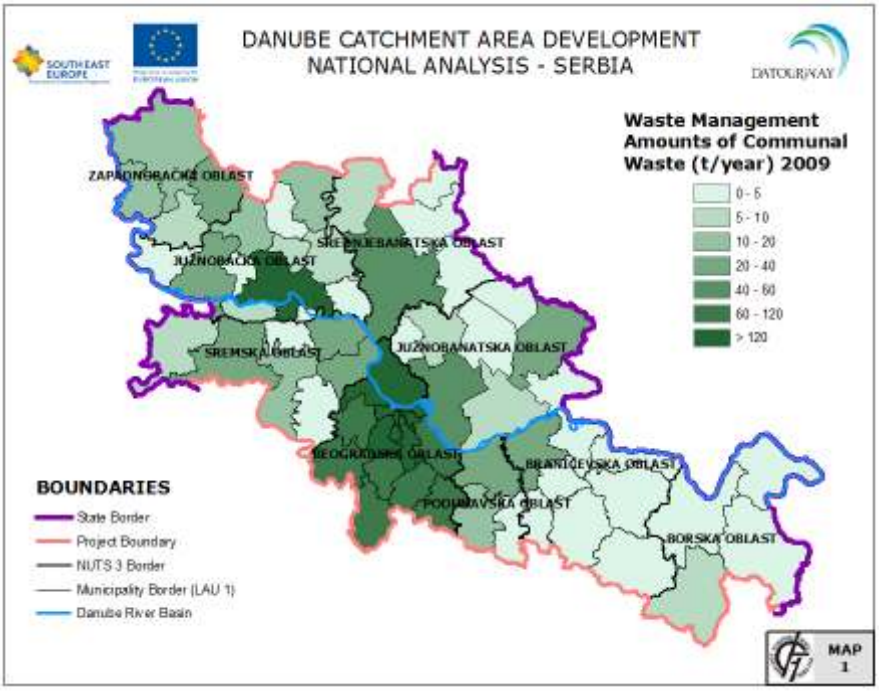
NUTS 3	Municipality	t/year (2009)
Zapadnobacki	Sombor	**13,873**
	Apatin	**13,714**
	Kula	**20,210**
	Odžaci	**8,700**
Juznobacki	Novi Sad-grad	**130,000**
	Bač	**3,415**
	Bačka Palanka	**25,481**
	Bački Petrovac	**3,082**
	Beočin	**6,723**
	Bečej	**10,015**
	Vrbas	**11,212**
	Žabalj	**5,777**
	Srbobran	**3,755**
	Titel	**3,580**
	Temerin	**6,194**
	Sremski Karlovci	**3,694**
Srednjebanatski	Zrenjanin	**54,637**
	Žitište	**4,283**
	Nova Crnja	**2,667**
	Novi Bečej	**6,583**
	Sečanj	**3,438**
Juznobanatski	Alibunar	**4,189**
	Bela Crkva	**4,276**
	Vršac	**22,495**

[7] Waste Management Strategy of the Republic of Serbia for the period 2010-2019
[8] Yearly amounts of communal waste were **calculated** on the basis of measurings conducted in representative municipalities.

	Kovačica	**5,856**
	Kovin	**7,727**
	Opovo	**2,313**
	Pančevo	**52,614**
	Plandište	**2,808**
Sremski	Inđija	**20,588**
	Irig	**2,588**
	Pećinci	**4,515**
	Ruma	**14,673**
	Sremska Mitrovica	**21,005**
	Stara Pazova	**28,244**
	Šid	**9,530**
City of Belgrade	Belgrade Town - Voždovac, Vračar, Zvezdara, Zemun, Novi Beograd, Palilula, Rakovica, Savski venac, Stari grad, Čukarica	**780,000**
	Barajevo, Grocka, Lazarevac, Mladenovac, Obrenovac, Sopot, Surčin	**117,707**
Podunavski	Velika Plana	**4,840**
	Smederevo	**31,342**
	Smederevska Palanka	**15,559**
Branicevski	Veliko Gradište	**2,018**
	Golubac	**1,045**
	Žabari	**1,249**
	Žagubica	**1,581**
	Kučevo	**1,792**
	Malo Crniće	**1,332**
	Petrovac	**3,344**
	Požarevac	**21,525**
Borski	Bor	**6,215**
	Kladovo	**2,520**
	Majdanpek	**2,415**
	Negotin	**4,607**

Source: Waste Management Strategy of the Republic of Serbia for the period 2010-2019

Picture 27. Estimated amounts of communal waste per year in the the Serbian part of Danube catchment area



Source: Waste Management Strategy of the Republic of Serbia for the period 2010-2019

Total estimated amount of communal waste in Serbia in 2009. is 2.374.3740,87 t/year.

However, installations for biological treatment and incineration of communal waste do not exist. Installation for treatment or disposal of **dangerous waste** does not exist either. The biggest amounts of **non-dangerous industrial waste** come from processing industries. Important amounts of waste come also from agriculture, exploitation of mineral resources and construction[9].

7. ECONOMIC CHARACTERISTICS

7.1. General economic status

7.1.1. Gross domestic product (GDP)

According to the explanations given by the Statistical Office of Serbia, data on GDP represent a revision of previously published results of the calculation of GDP and other macroeconomic aggregates for the period 1997-2007 as well as estimations for 2008.

This has been done in accordance with the methodology of the System of National Accounts (SNA 93), the European System of National Accounts (ESA 95) and new international standards and recommendations. At the time of the preparation of the present General Scheme, official data on GDP were available only for the entire Republic of Serbia, official data at lower territorial units being in preparation.

In order to meet Project requirements, GDP data at the level NUTS 2 and NUTS 3 were calculated by the Republic Agency for Spatial Planning for Donauregonen project.

The calculation was based both on data on GDP at the level NUTS 0 / NUTS 1 (1999-2008) and data on so called "national product" (1999-2005) which includes only material production (non-material services being excluded). Lack of data on national income for the period 2006-2008 was overcome by the estimate of GDP at the level NUTS 3 based on realized annual growth rate for the period 2000-2005. GDP at the level NUTS 2 was estimated for the period 2006-2008 based on realized shares of GDP of Vojvodina and Central Serbia (2000-2005) in the total GDP of the Republic of Serbia. As exchange rates were not officially determined by the National Bank of Serbia for the period 1996-1998, data are given starting from 1999:

Table 11. Gross domestic product (GDP) at current market prices at NUTS level 2 (millions of euro)

Region	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Vojvodina	5,497.3	8,323.2	4,346.2	5,200.4	5,514.7	5,883.8	6,582.6	7,224.5	8,923.2	10,359.5
Central Serbia	12,417.7	18,108.1	8,840.1	11,611.4	12,494.0	13,839.7	14,525.3	16,080.4	19,861.4	23,058.4

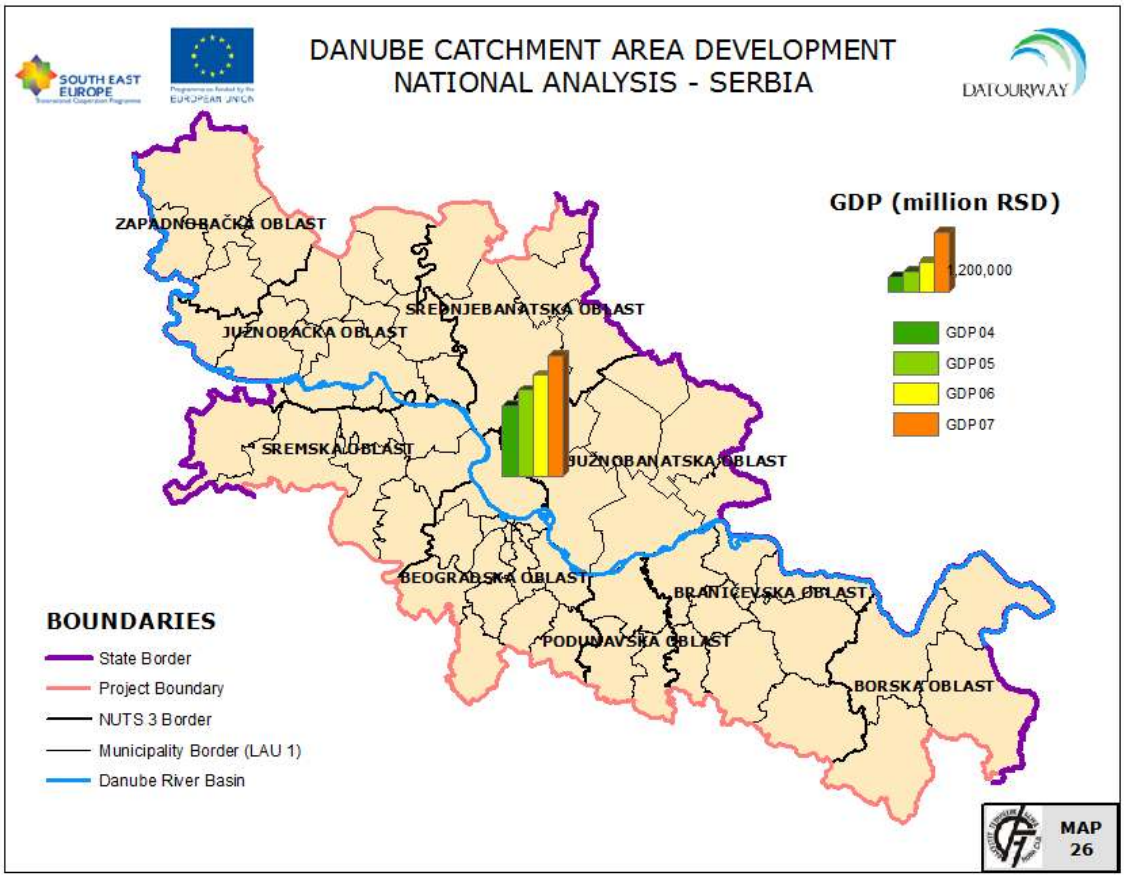
Source: Statistical Office of Serbia, National Bank of Serbia

The economy development analysis of the area will be up to certain level insufficient. Until 2005 the national statistics institute had different statistical data collection methodology. Recently the statistical indicators have been changed following the EU standards.

At this moment there are just national GDP data available, while the data for counties and municipalities are expected in 2011. The National statistics institute is working on new criteria for municipality development assessment. However these data are still not available.

[9] Spatial Plan of the Republic of Serbia, Draft, 2010

Picture 28. GDP in Milion of RSD in the period 2004-2007, Republic of Serbia



7.1.2. GDP for the region in euro per inhabitant[10]

GDP in Euro *per capita* had the following values in the period 1999-2008:

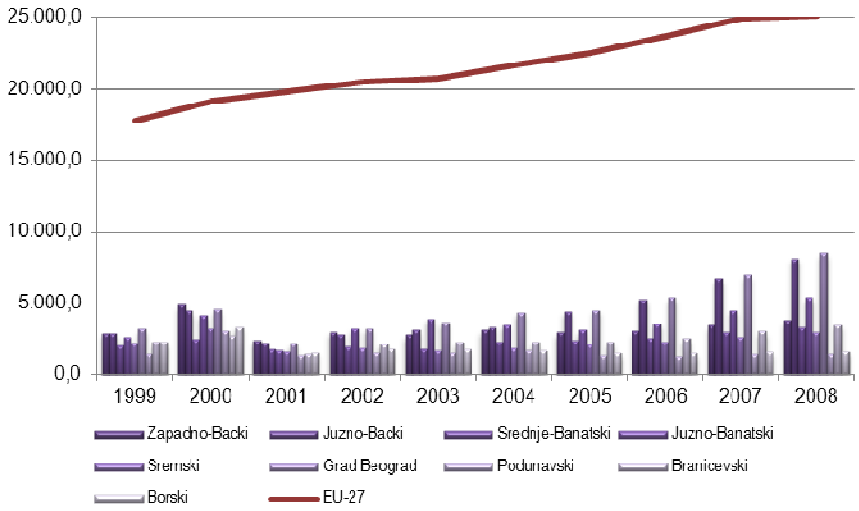
Table 12. Gross domestic product (GDP) at current market prices at NUTS level 2 (euro per inhabitant)

Region	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU - 27	17,800	19,100	19,800	20,500	20,700	21,700	22,500	23,700	24,900	25,100
Vojvodina	2,703.4	4,097.2	2,140.9	2,555.7	2,716.3	2,909.5	3,270.2	3,607.6	4,480.6	5,233.7
Central Serbia	2,254.9	3,301.4	1,615.1	2,124.6	2,292.3	2,543.7	2,676.1	2,972.9	3,684.8	4,293.3

Source: Statistical Office of Serbia, National Bank of Serbia, Eurostat

[10] Republic Agency for Spatial Planning, 2010

Picture 29. Gross domestic product (GDP) at current market prices at NUTS level 3 (euro per inhabitant)



Source: Statistical Office of Serbia, National Bank of Serbia, Eurostat

GDP in Euro *per capita* was extremely low compared to the EU-27 average. In 2008, Serbian GDP in Euro *per capita* was only about 18.1% of the European one. It was slightly higher in Vojvodina (20.8%) than in Central Serbia (17.1%). GDP in Euro *per capita* had the same trend as the GDP in current market prices, with a drop in 2001 and a slow recovery after that year. GDP values in Euro *per capita* at the level NUTS 3 depend, however, not only on the achieved GDP but also on the number of inhabitants, and that is why the situation at this territorial level is more diverse than at the level NUTS 2. Counties with the highest values were the City of Belgrade, Zapadnobacki and Juznobanatski County, while the lowest values can be observed in Podunavski and Borski County.

7.3. Economic activity

As consequence of armed conflicts, international isolation and deep inner economic and social crisis during the 1990's, Serbian economy is currently weaker than in the late 80's. Economic transition started only in 2001/2002 and is still facing many obstacles (frequent elections, insufficient coordination of governmental policies, lockouts, etc.). However, there are signs of consolidation and recovery, especially in regions that are traditionally more developed than others (City of Belgrade and Juznobacki County, for instance).

Continuous concentration of population and activities in the the Serbian part of Danube catchment area is an old and constant phenomenon. This area has better economic performances than the rest of the country, though it certainly shows important interregional imbalances.

Key economic assets of the the Serbian part of Danube catchment area lie in a significant share of arable land (followed by a growing food-processing industry), tourist potentials (based on natural and cultural heritage), available labour force, concentration of enterprises (including top 500 enterprises) and concentration of the country's top education and research institutions. The biggest development gap at the level NUTS 3 exists between the City of Belgrade and Branicevski County. In terms of development, Juznobacki County occupies the second position whereas other counties lag fairly behind.

Another important issue is of a methodological nature and includes discontinuity and incompatibility of economic data with EU standards and Project requirements. Though EUROSTAT methodology is now becoming more visible in Serbia, more time is needed for the Statistical Office of Serbia and other relevant institutions to create data records compatible with EU statistics.

7.4. Main economic sectors

7.4.1. Structure of enterprises

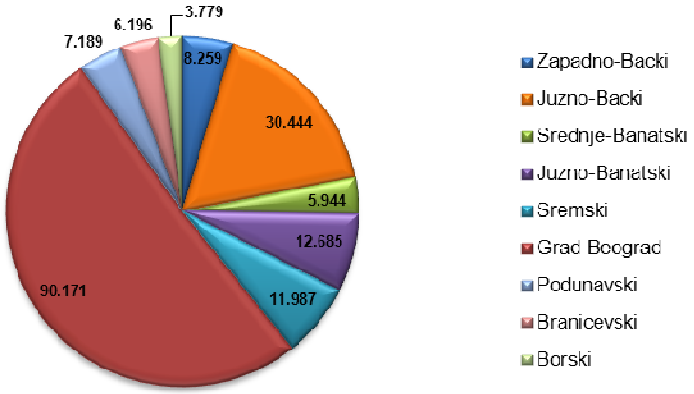
The total number of enterprises in the Serbian part of the the Serbian part of Danube catchment area in 2008. was 176.654 and in whole Serbia 306.506. In comparison with 2005, in 2008 the total number of enterprises in the the Serbian part of Danube catchment area increased by 30.083 and in whole Serbia by 47.911.

In next table and graf total number of enterprises on NUTS3 level is shown for the year 2005 and 2008. in the Serbian part of Danube catchment area.

Table 13: Structure of enterprises number at NUTS3 Level, 2005. in the Serbian part of Danube catchment area

NUTS 3	Tradesman	Tradesman (%)	Small enterprises (from 0 to 49 employees)	Small enterprises (%)	Medium enterprises (from 50 up to 249 employees)	Medium enterprises (%)	Big enterprises (250 and more employees)	Big enterprises (%)	Total	Total (%)
Zapadnobacki	4.413	76,4	1.266	21,9	76	1,3	20	0,3	5.875	4,0
Juznobacki	17.912	69,4	7.564	29,3	238	0,9	79	0,3	25.893	17,7
Srednjebanatski	4.197	79,5	1.002	19,0	63	1,2	18	0,3	5.380	3,7
Juznobanatski	9.032	80,0	2.143	19,0	95	0,8	25	0,2	11.395	7,8
Sremski	8.100	79,4	2.021	19,8	70	0,7	13	0,1	10.304	7,0
Grad Beograd	45.562	62,4	26.441	36,2	719	1,0	279	0,4	73.101	49,9
Podunavski	4.942	80,6	1.142	18,6	43	0,7	8	0,1	6.235	4,3
Branicevski	4.692	80,9	1.066	18,4	31	0,5	9	0,2	5.898	4,0
Borski	2.710	82,4	535	16,3	33	1,0	12	0,4	3.390	2,3
Total	101.560	68,9	43.180	29,3	1.368	0,9	463	0,3	147.469	100,0

Picture 30. Structure of enterprises number at NUTS3 (2008.) in the Serbian part of Danube catchment area



Source: Republic Development Bureau

In the total number of enterprises in the Serbian part of Danube catchment area in 2008., tradesmen participate with 66.3%, small enterprises with 32%, medium sized enterprises with 1.3% and big enterprises with 0.4%.

7.5. Tourism

Protected Areas

National park "Fruška gora" and "Đerdap", also special nature reserves of Serbian part in The Serbian part of Danube catchment area, as important element of natural heritage are significant tourism potential. Some special nature reserves, such as "Old Begej- Carska bara "and" Obedska bara "are well known to the tourist population of the surrounding cities. Others are more or less has been known by tourism. All of them together are characterized by far greater opportunities for tourism development. In that term, tourism development is desirable for many reasons, particularly as an activity of importance for the conservation of protected areas. Tourism helps to, through the collection of tourist services achieve better quality protection of protected areas. Tourism in preserved nature of The Serbian part of Danube catchment area is happening, but he doesn't still has the characteristics of ecotourism, i.e., reserves do not have characteristics of eco destination. This means that they don't have represented walkways that allow visitors to reach the most parts of these protected areas, with signposts and a host of relevant data. The accommodation facilities are not regulated by the idea of eco accommodation facilities, which are basic accommodation database in ecotourism.

The conclusion is that, despite of rich and vivid natural resources in the Serbian part of Danube catchment area, all natural goods represent outstanding tourism resources, but only one part of them is affirmed for tourism sector.

Springs

The Serbian part of Danube catchment area has other natural resources with potential for the development of spa and wellness tourism. Danube area in Serbia could be characterized by developed spa tourism. In analyzing the content may seem attractive, the market required, the offer of wellness services, it is necessary to mention that there are 7 spas in this area. They will be particularly important when they offer differentiated and physical separated facilities for patients in treatment and offer to tourists. In the coastal area of the Danube, in a few places, are surfacing and mineral water, which could be used in spas for treatment or are currently only untapped potential. There are more mineral water sources that have not yet tapes and their exploitation only announces. Spa and wellness tourism is a product with huge potential for development which can meet the growing demand for specialized medical treatments. Only in the City of Belgrade, there are 16 spa and wellness centers.

Table 14. Spa and wellness in The Serbian part of Danube catchment area

NUTS 3 County	Spa	Features
Brad Beograd	Selters	Hyper-thermal alkaline-muriatic carbon-acidic mineral water "Selters", with a temperature of 50°C
Zapadnobacki	Junaković	The spa has springs of thermo-mineral water with a temperature up to 60°C. The water contains sodium, lithium, calcium and magnesium.
Zapadnobacki	Bezdan	With its mineral water belongs to the category of alkaline water rich in sodium hydro carbonate iodine with a temperature of 26 and 37°C.It is suitable for the treatment of various rheumatic and orthopedic diseases. Spa has two indoor pools, three Chinese theaters, department of electrical, paraffin, work, underwater, water, laser therapy and hand massage.
Sremski	Vrdnička	Thermal water with a temperature constant of 32.5 degrees Celsius, which classifies it into hypothermal waters, with a wide spectre of influences on the human organism.
Sremki	Slankamen	The spa has mineral waters with a temperature of 18.4°C. It belongs to the group of salty-iodine waters of sodium type. The water contains sodium-chloride, iodine, magnesium, calcium, strontium and barium.
Srednje banatska	Rusanda	There is a curative effect of mineral peloid (mud) from Rusanda lake. Thermal water from a well, with a temperature of 32°C and belonging to the category of sodium hydro-carbonate sulphur chemo-thermals.
Podunavski	Palanački Kiseljak	Four sources of mineral waters with temperature 56°C. Waters belong to the category of sodium hydro-carbonate, carbon-acidic hypo-thermals.

Culture and cultural infrastructure

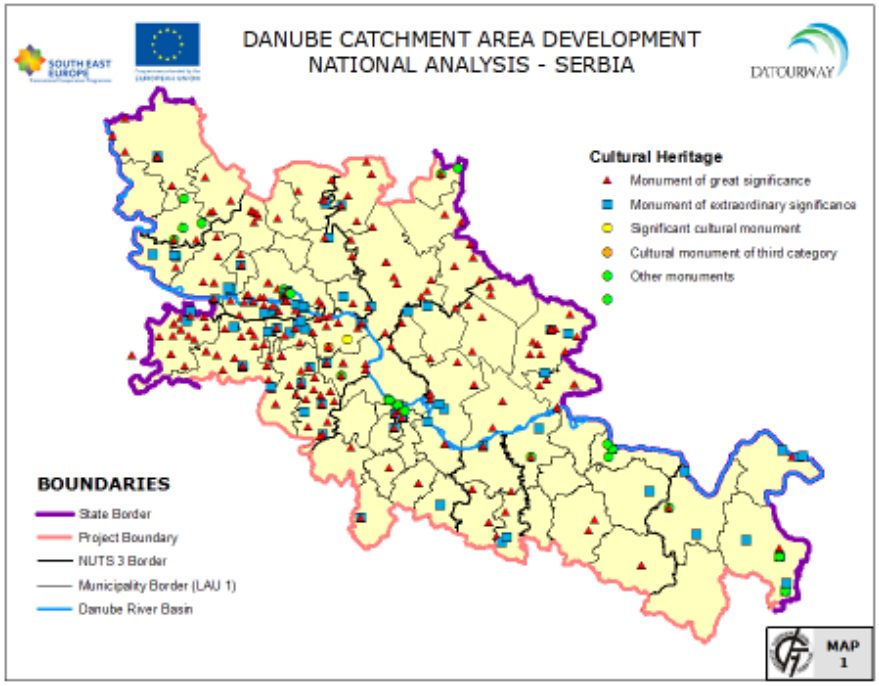
A special part of the cultural infrastructure is that part that constitutes anthropogenic tourism resources such as museums, theatres, cultural centres, exhibition galleries, monuments of monumental art, cultural and historical monuments, etc. Some of the components (sites) of cultural infrastructure such as cultural and historical heritage sites, museums and galleries are tourism resources for the development of cultural tourism while others (events, castles, environmental entities and authentic houses) are auxiliary resources. Cultural institutions types of museums, galleries and theaters are typical of larger cities (the most of them are settled in Belgrade, Novi Sad, Sombor, Zrenjanin, Smederevo, Požarevac), while in smaller places the function of organizing cultural activities have cultural centers. In 2008 in the Serbian part of Danube catchment area, has been 38 theatres, 57 museums, 24 galleries and 30 cinemas, which largest number is in Belgrade, the capital.

Table 15. Cultural infrastructure in the Serbian part of Danube catchment area, 2008

NUTS 2 Regions NUTS 3 County	*Theatres*	*Museums*	*Galleries*	*Cinemas*
Vojvodina	**12**	**10**	**34**	**6**
Zapadna Bačka	1	1	3	0
Juzna Bačka	11	6	20	5
Srednje banatska	1	1	2	1
Srem	0	0	1	0
Juzno banatska	**0**	2	8	**0**
Central Serbia region	**26**	**47**	**190**	**24**
Grad Beograd	24	42	182	24
Bor		2	1	0
Podunavlje	2	2	6	0
Braničevo		1	1	**0**
Total:	**38**	**57**	**224**	**30**

Source: Ministry of culture of the Republic of Serbia

Picture 31. Cultural heritage in the Serbian part of Danube catchment area



Tourism resources of anthropogenic nature

In the territory of the Serbian Danube basin are some of the most important archaeological sites of this part of the Balkans. The importance of the Danube as a communication and economic resources has placed the course of history in this area numerous villages, fortresses and settlements. The first archaeological finds dating from the period of prehistory. It is a **Lepenski Vir** near Majdanpek and **Vinča** near Grocka and **Rudna glava** in Majdanpek that stand out as archaeological sites of great importance. Culture Lepenski Vir and Vinča major are known as points in the development of civilizations and cultures of prehistoric people, and the Rudna glava prehistoric mine, the site is unique in the world.Special features of this part of the Danube basin are numerous remains of Roman forts and towns. Danube, over the centuries represented the natural border of the Roman Empire, and as the legacy of ancient times along it are well preserved remains of ancient cities of **Sirmium** (near Sremska Mitrovica) and **Viminacium** (near Požarevac). Along the Danube there are Pontes (at Kladovo) - the remains of Trajan's bridge, and the Roman fort **Lederata**, near Veliko Gradište. In urban areas such as Belgrade and Zemun are **Kalemegdan Fortress**- Ancient **Singidunum** and Gardoški breg-**Taurunum**. Both sites are very attractive and interesting tourist destinations, which in addition to architectural and cultural values containing the gastronomic and cultural events.

Table 16. Location of archaeological sites in the territory of The Serbian part of Danube catchment area, with the status of cultural monuments of great and extremely importance

County	Municipality	Site
Juzno backi	Beočin	**Gradina**, cultural monument of high importance
Juzno backi	Titel	**Kalvarija - the Titel Loess Plateau**, cultural monument of exceptional importance
Juzno backi	Bačka Palanka	**Turski šanac**, cultural monument of high importance
Juzno backi	Bačka Palanka	**Čelarevo,** cultural monument of exceptional importance
Juzno backi	Vrbas	**Čarnok**, cultural monument of high importance
Juzno backi	Novi Sad	**Kuva - Kastelum Onagrinum**, cultural monument of high importance
Srednje banatski	Novi Bečej	**Matejski brod**, cultural monument of high importance
Sremki	Inđija	**Akuminkum**, cultural monument of high importance
Sremki	Inđija	**Mihaljevac woods (Mihaljevačka šuma)**, cultural monument of high importance
Sremki	Inđija	**Kalakača**, cultural monument of high importance
Sremki	Šid	**Gradina on the Bosut river**, cultural monument of high importance
Sremki	Sremska Mitrovica	**Archeological site in Grgurevci**, cultural monument of high importance
Sremki	Sremska Mitrovica	**Sirmium,** cultural monument of exceptional importance
Sremki	Ruma	**Basijana,** cultural monument of exceptional importance
Sremki	Ruma	**Burrial mound near Varcal's mill (Humka kod Varcalove vodenice)**, cultural monument of high importance
Sremki	Ruma	**Gomolava,** cultural monument of exceptional importance
Juzno banatski	Vršac	**Židovar,** cultural monument of exceptional importance
Juzno banatski	Vršac	**Dupljaja**, cultural monument of high importance
Juzno banatski	Pančevo	**The city of Starčevo,** cultural monument of exceptional importance
Grad Beograd	Belgrade - Zemun	**Gardoš Hill - Taurunum**, other monuments
Grad Beograd	Belgrade, Stari Grad	**Kalemegdan Fortress – the Antique Singidunum,** other monuments
Grad Beograd	Belgrade - Grocka	**Vinča – site *Beli Breg*,** cultural monument of exceptional importance
Borski	Kladovo	**Pontes,** cultural monument of exceptional importance
Borski	Kladovo	**Karataš – Diana Fortress,** cultural monument of exceptional importance
Borski	Majdanpek	**Rudna Glava,** cultural monument of exceptional importance
Borski	Majdanpek	**Lepenski Vir,** cultural monument of exceptional importance
Braničevski	Požarevac	**Viminacium,** cultural monument of exceptional importance
Braničevski	Kučevo	**Kraku Lu Jordan,** cultural monument of exceptional importance
Braničevski	Veliko Gradište	**Lederata – Roman Fortification,** cultural monument of exceptional importance

Source: Ministry of culture of the Republic of Serbia

The legacy of cultural heritage is a great tourist potential in the Serbian The Serbian part of Danube catchment area. The number and importance of cultural monuments in this area is the result of the rich and turbulent history of this region, who over many centuries been a major crossroad in the Balkans which have gained and bypassed the civilizations, cultures and peoples.

Table 17. Overview of cultural property of great importance in the Serbian part of Danube catchment area

county	Municipality	Site
Juzno backi	Bač	**Franciscan Monastery**
Juzno backi	Bač	**Bođani Monastery**
Juzno backi	Bač	**Fortress and suburbium**
Juzno backi	Bačka Palanka	**Čelarevo, Dunđerski Family Manor House**
Juzno backi	Bačka Palanka	**The House in Neštin**
Juzno backi	Bački Petrovac	**The house in Bački Petrovac**
Juzno backi	Bečej	**"Šlajz" river lock**
Juzno backi	Beočin	**Beočin Monastery**
Juzno backi	Beočin	**Rakovac Monastery**
Juzno backi	Novi Sad	**Almaška Church**
Juzno backi	Sremski Karlovci	**The city center of Sremski Karlovci**
Juzno backi	Sremski Karlovci	**The Place of the 1699. Treaty of Karlowitz (Mesto Karlovačkog mira 1699.)**
Juzno backi	Sremski Karlovci	**Patriarch's Palace**
Juzno backi	Sremski Karlovci	**Congregation Church (Saborna crkva) in Sremski Karlovci**
Juzno backi	Titel	**The Church of the Holy Martyr Stefan of Decani (Crkva velikomučenika Stefana Dečanskog) in Vilovo**
Juzno backi	Žabalj	**Serbian Orthodox Church in Čurug**
Juzno banatski	Pančevo	**Church of Holy Transfiguration (Crkva sv. Preobraženja)**
Juzno banatski	Pančevo	**Vojlovica Monastery**
Juzno banatski	Vršac	**Mesić monastery in Mesić**
Juzno banatski	Vršac	**Bishop's Palace**
Podunavski	Velika Plana	**Radovanjski lug**
Podunavski	Velika Plana	**Pokajnica Monastery**
Sremki	Inđija	**St. Nicholas Church (Crkva s. Nikole)**
Sremki	Inđija	**The 1691. battlegrounds at Slankamen**
Sremki	Irig	**Grgeteg Monastery**
Sremki	Irig	**Novo Hopovo Monastery**
Sremki	Irig	**Staro Hopovo Monastery**
Sremki	Irig	**Jazak Monastery**
Sremki	Irig	**Krušedol Monastery**
Sremki	Irig	**Mala Remeta Monastery**
Sremki	Irig	**Velika Remeta Monastery**
Sremki	Irig	**Vrdnik – Ravanica Monastery**
Sremki	Pećinci	**Village House in Deronje**
Sremki	Sremska Mitrovica	**The Old Serbian Church of St. Stefan (Stara Srpska crkva Svetog Stefana)**
Sremki	Sremska Mitrovica	**Divša Monastery in Šišatovac**
Sremki	Sremska Mitrovica	**Kuveždin Monastery in Šišatovac**
Sremki	Sremska Mitrovica	**Petkovica Monastery in Šišatovac**
Sremki	Sremska Mitrovica	**Šišatovac Monastery**
Sremki	Srara Pazova	**Barns and ancillary outbuildings (kotobanje) in Golubinci**
Sremki	Šid	**The Church of the Holy Archangel Gabriel (Crkva Svetog Arhangela Gavrila)**

Source: Ministry of culture of the Republic of Serbia

On the territory of the The Serbian part of Danube catchment area in Serbia is located 40 cultural properties ranked as good of great importance. Among them shines complex of Orthodox monasteries and temples on Fruška Gora Mountain, known as the Serbian Holy Mountain. In addition to religious architecture, in this area are protected by law and authentic houses in Neštin, Bački Petrovac and Ogar, illustrating the old ways of construction of residential houses in Pannonia. In the preceding table is an overview of cultural property of great importance, only and it should be added other cultural properties of great importance which are 226, as well as over 300 other cultural goods of minor importance. It is the most diverse sites of origin and purpose: the fortresses, fortifications, military and civilian buildings, churches, monasteries, over other economic buildings and important institutions, the law protected the rural and urban units that reflect the architectural and cultural features of the climate in which they occur.

Table 18. Number of events in the Serbian part of Danube catchment area

County	Cultural Events	Fairs and Exhibitions	Religious Holidays	Sports Events	Traditional Village Festivities	Other	Total
Zapadno backi	37	5	3	8	2	27	82
juzno backi	134	23	10	35	11	65	278
srednje banatski	28	1	1	4	5	14	53
Sremski	64	11	5	13	13	24	130
juzno banatski	58	8	9	21	8	53	157
Grad Beograd	11	29	1	2	0	9	52
Borski	16	4	0	5	4	6	35
Podunavski	16	3	3	1	1	17	41
Braničevski	12	4	4	5	4	15	44
Total	**376**	**88**	**36**	**94**	**49**	**230**	**873**

Source: www.vojvodinaonline.com, data's from tourism organizations in the Project area

Very important tourism offer in The Serbian part of Danube catchment area are events, especially in the municipalities in the Vojvodina region, which has both strong traditions and developed channels of supply and implementation. Assumption is that in Vojvodina during one year is holding over 600 different events that at least 100 can be called tourist, while others are festivals, parades, games, sports and rekreational events, meetings, fair and exhibitons, tastings, cultural events. Of that number, 80 events can be called the Mega because it gathers more than 50,000 individual visitors.

Main tourism infrastructure

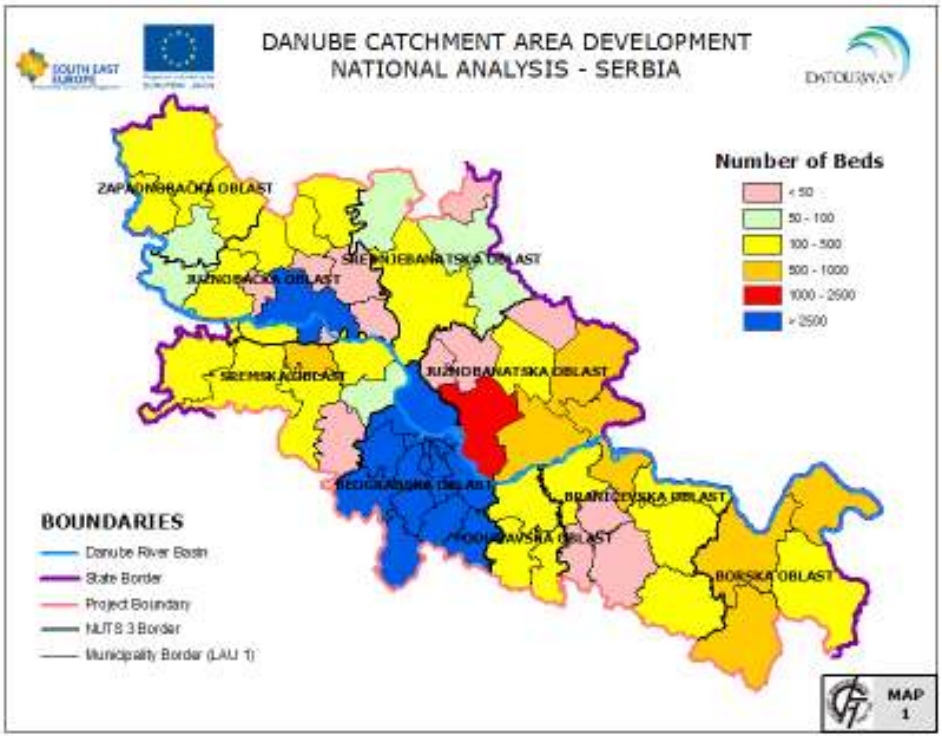
The existing tourism infrastructure in the Serbian part of Danube catchment area is concentrated mainly in several areas with established tourist destinations. The capital Belgrade which is attracting the most tourists' attention has the highest concentration of accommodation establishment, rooms and beds. 53,47% of total number of beds in Project area is settled in the City of Belgrade. Other municipalities and their central cities which attract tourist attention such as Novi Sad, Zrenjanin, Vršac, Bela Crkva, Kladovo, etc. have high concentration of tourist accommodation facilities and high number of bed places in them. 69,49% of Juzno backi county accommodation facilities is settled in the City of Novi Sad, which shows that Novi Sad is important tourism destination in county, and also in Vojvodina region.

Table 19: Bed places in tourist accommodation establishments (All types) in the Serbian part of Danube catchment area 2008

NUTS 2 Regions NUTS 3County	Accommodation establishments	Number of rooms/ camp sites	Bed places
Vojvodina region	**156**	**5669**	**13433**
Zapadnobacki	**26**	**451**	**1031**
juzno backi	**59**	**1670**	**3848**
srednje banatski	**13**	**290**	**685**
Sremki	**31**	**648**	**1506**
juzno banatski	**23**	**1151**	**3169**
Central Serbia	**506**	**40680**	**102749**
Grad Beograd	**136**	**7643**	**17934**
Borski	**18**	**951**	**2507**
Podunavski	**13**	**517**	**1014**
Braničevski	**16**	**885**	**1847**
Project area (DAT)	**335**	**14206**	**33541**
Serbia total	**662**	**46349**	**116182**
% DAT from Serbia	**50,60%**	**30,65%**	**28,87%**

Source: Statistical office of the Republic of Serbi

Picture 32. Number of beds in the Serbian part of Danube catchment area



Tourism infrastructure in the Serbian part of Danube catchment area is most developed in Belgrade, Novi Sad and its surrounding, as well as spa and climatic resort and lakes. It should be noted Junakovic Spa near Apatin, where is planned construction of a large water park, which will be of interest to tourists, extend the offer and increase accommodation capacity. Sombor municipality in Zapadno backi county is rich in farms, which are tourist attractions and accommodation facilities suitable for spending time outdoors. In Serbia, currently is evidence of accommodation facilities, and it is not possible to give a complete overview of all accommodation facilities in complementary facilities for accommodation.

There are a number of municipalities bordering the Danube, which have a underdeveloped tourist infrastructure and great tourist potential. This situation is in municipalities Bački Petrovac and Sremsmi Karlovci, which have fewer than 50 beds and a huge tourism potential.

Auxiliary tourism infrastructure

Auxiliary tourism infrastructure in the Serbian part of Danube catchment area representing the following tourist objects and attractions:

- *eco trails on Fruška gora mountain*

With its availability and numerous natural and cultural attractions Fruska Gora attracts large numbers of people. In this region there is a tradition and culture activities in nature, so that the most beautiful parts of Fruska above established resorts, marked trails and mountain lodges built, given the size and concentration of attractiveness, in our investigations there are 4 lanes. The most frequent activity is walking, for which they are marked. It is possible to walk on undiscovered paths.Another activities for which there are excellent conditions he rides mountain bikes. For these are the best marked trails, and the ups and downs are evenly spaced and not too steep.

Trail 1st
The first path going east part of the mountain, through forest and stretches for 18,670 m. It ranges from the Lodge at Stražilovo, according to Branko's Tomb (distance 1340 m) passing by Grgeteg (distance 5950 m) TV tower (distance 4860 m), Astal (distance 1380 m) and Selista (distance 3380) and ending at Stražilovo.

Trail 2nd
Passing through the woods, and partly next weekend settlements, this course offers the enjoyment of scenic landscapes streaked with lookouts. Length is 17,120 m. Start and end points are on Popovici, and the consensuses Glavica (distance 2710 m), Astal (distance 4110 m), TV Tower (distance 1380 m), Kraljeva stolica (distance760m).

Trail 3rd
Trail provides a very attractive tour three monasteries. This kind of monastery trail starts from Branko's grave and, following the route of the marathon reaches Fruška Gora monastery Grgeteg first (distance 5950 m). Since the route crosses Grgeteg Fruskogorska routes and continues to the monastery Krušedol (distance 4600 m) and the United Remeta (distance 3400 m) and ends at the starting point.

Trail 4th
This trail leads through diverse landscapes, from the deciduous forests, across meadows and glades, through orchards and gardens, settlements, to the monastery and Thermal Spa in Vrdnik. Length is 33,255 we can go in one day.The starting point is Popovica, and then goes Ledinačko Lake (distance 3840 m), Vrdnik (8685 m), Jazak monastery (distance 3330 m), Brankovac (distance 8200 m), Zmajevac (distance 4300 m) and Stari Ledinci (distance 4800 m

- "salaš" farms and traditional village housekeepings

Table 20. Number of farms, village housekeepings and ethno houses in the Serbian part of Danube catchment area

County	Farms „Salaši"	Village housekeepings	Ethno houses
VojvodinaRegion	38	-	28
severno backi *	12		3
zapadno backi	4		9
juzno backi	19		9
srednje banatski			2
Sremki	2		4
juzno banatski	1		1
Central Serbia region	-	16	-
Grad Beograd		5	
Borki		7	
Podunavski			
Braničevski		4	
Total:	38	16	28

The potentials of rural tourism in the Serbian part of Danube catchment area as large, but still far from being used in tourism sector.The analysis of these potentials is evident in the variety and diversity for using them in tourism industry. In the region of Vojvodina, which is in the field of rural tourism much more developed regions of Central Serbia, it is evident that as the highest potential offer by issuing farm as a tourist destination. This is particularly true of North, Zapadno backi county and Juzno backi County, where the farms, as an authentic house in a secluded well kept and a real gem of the region's tourism offer. In addition to farms, tourist feature of the region of Vojvodina are numerous ethnic houses that are almost evenly distributed throughout the region. Great ethnic and cultural diversity of Vojvodina has resulted in the formation of

ethno house containing the museum exhibits from the past life of peoples and ethnic minorities, which live in Vojvodina. In Vojvodina is the absence of noticeable rural households as a potential offer of rural tourism. Counties in Central Serbia in the field of rural tourism rely solely on the supply of rural households. This offer is concentrated on a few points (Bor, Malo Crnićе) and is characterized by small accommodation facilities. Rural tourism offer in the region has other attractions.

- Cycling tracks EUROVELO

Cycling track EUROVELO represents part of Corridors 6 and 11 in the Serbian part of Danube catchment area. The roots of cycling in this region should only be awakened and directed properly, primarily through the education of children and young people. One of the steps that lead towards successful cycling tourism is the organization of bicycle tours, so attention could be to develop this kind of tourism offer.

- Pools, bathing beaches, river beaches and beaches on lakes
- For sport and leisure activities and hobby tourism there are: horse farms, hunting grounds, aquaparks and golf courses.

For the needs of hunting and hobby tourism, hunting lodges, boxes, forest watch towers and other facilities related to hunting tourism have been created in the 27 hounting places in the Serbian part of Danube catchment area. Here are horse stables and facilities for equine tourism in the City of Belgrade and municipalities: Bačka Palanka, Bač, Požarevac and Bečej.

Main tourism indicators

Analysis of tourist traffic for the Serbian part of Danube catchment area has been done on the basis of official statistics and based on data collected in the field. The analysis was done for the last 6 years by counties, and only includes the basic structure of the number of tourists (domestic/ foreign), number of nights domestic/ foreign and derived values for length of stay. For comparison with trends in tourism is used wider area of comparison which is conducted with current trends in the level of Serbia. Results and analysis are presented in the following tables and charts.

The analyzed data presented in tables and graphs below show the following results:

The most receptive market for domestic and foreign tourists are the Brad Beograd, Juzna backa and Borki county with its tourist destinations (the largest number of domestic and foreign tourists attracted to city tourist offers: Belgrade and Novi Sad and its surroundings).

As regards the entire region covered by the project can be seen that he was greatly receptive market for the Republic of Serbia, because between 49-52% of total arrivals, over 30% of nights taking place right in the Serbian part of Danube catchment area, but it needs to strengthen its share of arrivals and overnight stays in other counties.

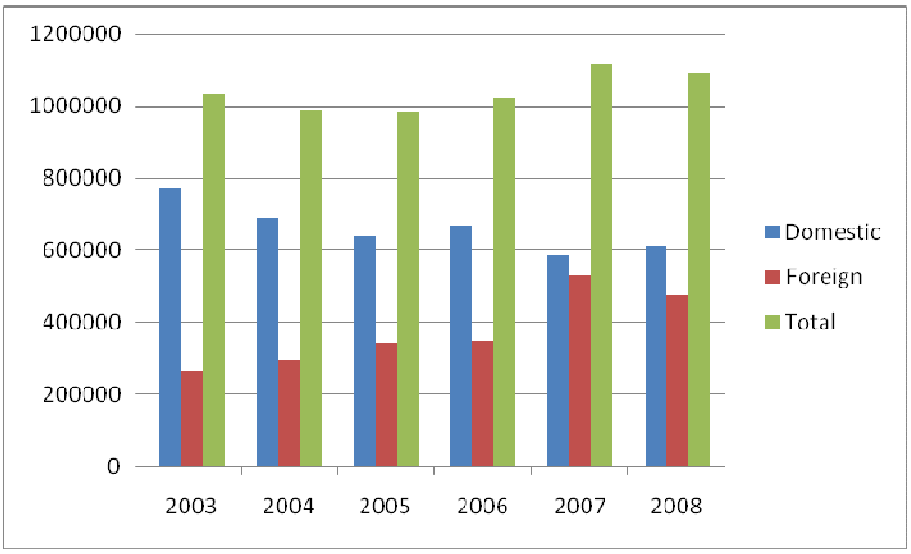
Should also affect the additional content and creating adequate concept of tourism and tourism products, which will extend the average length of stay, whether any foreign or domestic, which shows that the tourist hold and average of 2-4 days.

Table 21. Tourists arrivals in the period from 2003- 2008 in the Serbian part of Danube catchment area

NUTS 3	2003	2004	2005	2006	2007	2008
Zapadno backi	20449	21318	20109	21022	25647	23858
Juzno backi	91613	79061	83466	92801	116513	127805
Srednje banatski	23890	24795	29438	25743	14656	24351
Sremki	22231	31230	31929	30260	37171	39617
Juzno banatski	23230	23775	23688	21936	23932	26905
Grad Beograd	728087	693933	674785	705439	764466	705574
Borki	74771	68630	69224	74771	71205	64843
Podunavski	27530	23405	23670	27530	31073	31665
Braničevski	22485	22554	27125	22485	31367	44781
Total	1034286	988701	983434	1021987	1116030	1089399
Republic of Serbia	1997947	1971683	1998469	2006488	2306558	2266166
% DAT from Serbia	51,77%	50,14%	49,21%	50,93%	48,38%	48,07%

Source: Statistical office of the Republic of Serbia

Picture 33. Share of tourist arrivals in Project area (domestic/ foreign) for the period 2003-2008 the Serbian part of Danube catchment area



Source: Statistical office of the Republic of Serbia

Picture 34. Number of tourist arrivals in Project area (domestic/ foreign) for the period 2008 in the Serbian part of Danube catchment area

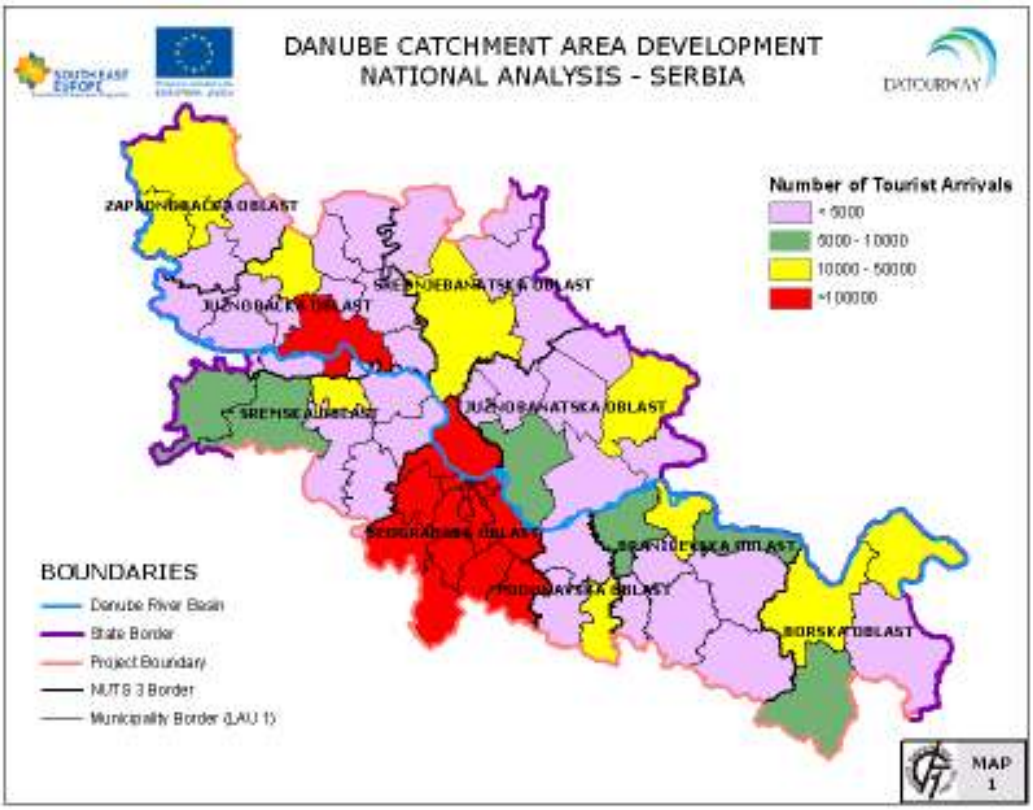
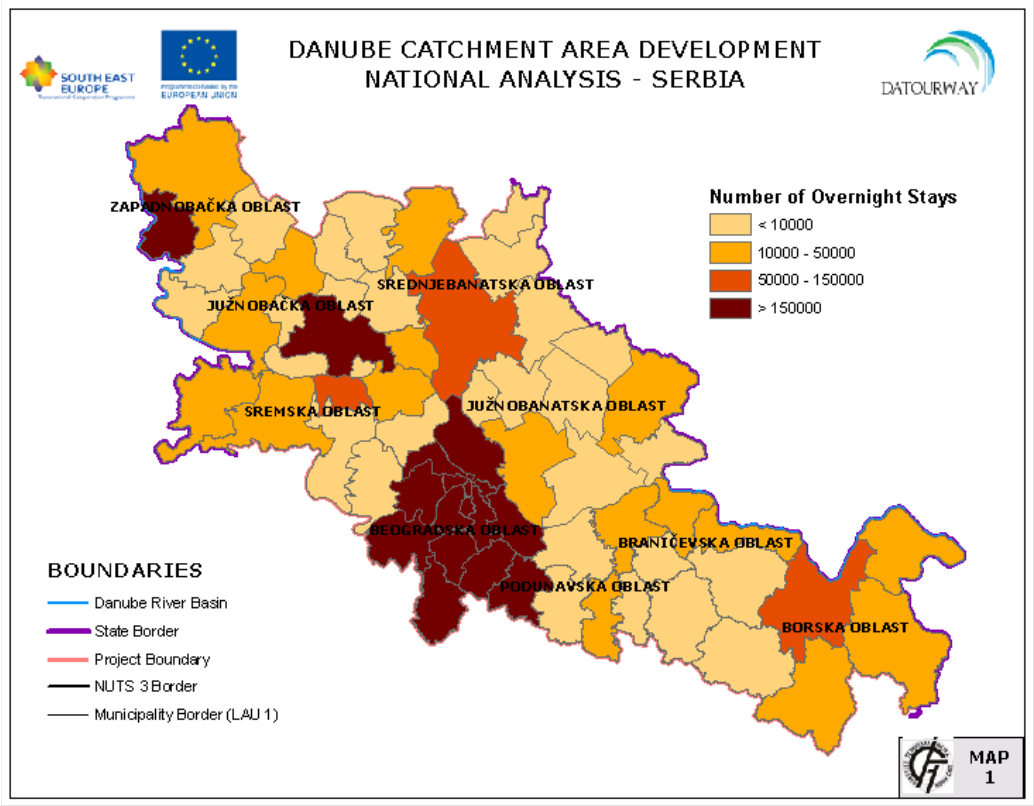


Table 22. Number of overnight stays (spent tourism nights) in all types of accommodation facilities in the Serbian part of Danube catchment area

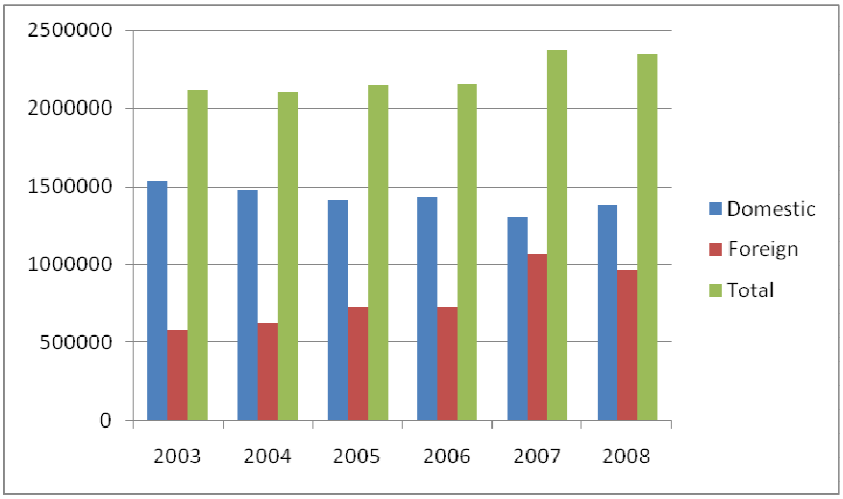
NUTS 3	2003	2004	2005	2006	2007	2008
Zapadno backi	77055	80163	81872	67893	96910	89755
Juzno backi	174415	152169	162327	188909	224662	240401
Srednje banatski	69427	59145	93747	91311	55931	93690
Sremki	68376	92867	99104	98170	121960	136908
juzno banatski	73059	72129	63127	49813	49050	58416
Grad Beograd	1360934	1384389	1366337	1366429	1563526	1431328
Borki	172876	157955	167083	172876	157229	153222
Podunavski	40899	30340	30996	40899	36650	39833
Braničevski	79698	75036	78553	79698	63175	105549
Total	2116739	2104193	2143146	2155998	2369093	2349102
Republic of Serbia	6684592	6642623	6499352	6592622	7328692	7334106
% DAT from Serbia	**31,67%**	**31,68%**	**32,97%**	**32,70%**	**32,33%**	**32,03%**

Source: Statistical office of the Republic of Serbia

Picture 35. Number of overnight stays (spent tourism nights) in all types of accommodation facilities in the Serbian part of Danube catchment area



Picture 36. Share of number of overnight stays (domestic/ foreign tourists) by spent tourism nights in the Serbian part of Danube catchment area



Source: Statistical office of the Republic of Serbia

Tourism in the region has 28.87% of the beds in the country, 32.03% of spent nights and 48.07% of revenue from accommodation. Data show that the area of the project is with exceptance of Belgrade and Novi Sad, economically less developed as a tourist destination.

With regard to tourism development in the Sebian Project area it should make the following conclusion:

- The potential for development of the Danube river is not sufficiently used for tourism development. Excaptence are the City of Belgrade and the City of Novi Sad. The reasons are many and diverse, with cross-border, national and regional character. In the Serbian part of the project area a major challenge is the lack of exposure to the cultural, historical and natural potentials, lack of well promote regional tourism products, poor quality of infrastructure and transport and inadequate local capacity to adapt to economic growth through tourism. The transnational and cross border nature of environmental damage are associated with deterioration of water quality, damaged landscape, the lack of a common transnational strategy covering the overall tourism development on the Danube, particularly in its lower part.

8. INFRASTRUCTURE

8.1. Transport infrastructure

The transport infrastructure in the The Serbian part of Danube catchment area comprises of point and linear components of the road, railway, port and partially airport infrastructure.

All Pan-European Transport Corridors crossing Serbia pass through the The Serbian part of Danube catchment area: Pan-European Transport Corridors, No7 and No10.

- Corridor №. 10: Pan european koridor X, conducts international transport flows between countries of South and SouthEast Europe, by the Serbian section Xb: Subotica – Backa Topola – Srbobran – Novi Sad – Indjija - Stara Pazova – Belgrad and section Xc: Belgrad – Nis – Pirot – state border of Bulgaria.
- Corridor №. 7 (Danube River): Given that there is only (improper) one railway bridge over the Danube in the Serbian territory (exactly Autonomic Province Vojvodina - in Novi Sad) in intersection with the Corridor №. 10. Danube river does not provide the good prerequisite for the intensification of cross-border communications in the region.

The road infrastructure in the the Serbian part of Danube catchment area comprises of national and municipal roads. Data in *Table 23_sh*ows the length of the roads from the national road network in the relevant area.

Table 23. Length of the roads from the national road network in the the Serbian part of Danube catchment area (by class of the road)

NUTS 2 Regions / NUTS 3 Counties	Total	Motorways incl E roads	First-class (DP I, II cl)
Republic of Serbia	40 845	634	17 065
Srednjebanatska Oblast	992,01	0	403,36
Južnobaèka Oblast	1602,32	64,72	653,72
Sremska Oblast	1349,32	119,49	512,99
Zapadnobaèka Oblast	1095,69	53,62	258,64
Južnobanatska Oblast	1492,8	80,76	403,22
Beogradska Oblast	1828,79	135,46	782,45
Podunavska Oblast	697,33	57,73	266,92
Branièevska Oblast	1585,66	0	592,89
Borska Oblast	1418,77	84,45	556,1
The Serbian part of Danube catchment area (DAT)	12 063	596	4 430
Serbia total (SR)	40 845	634	17 065
% of DAT from SR	29.53%	94.00%	25.96%

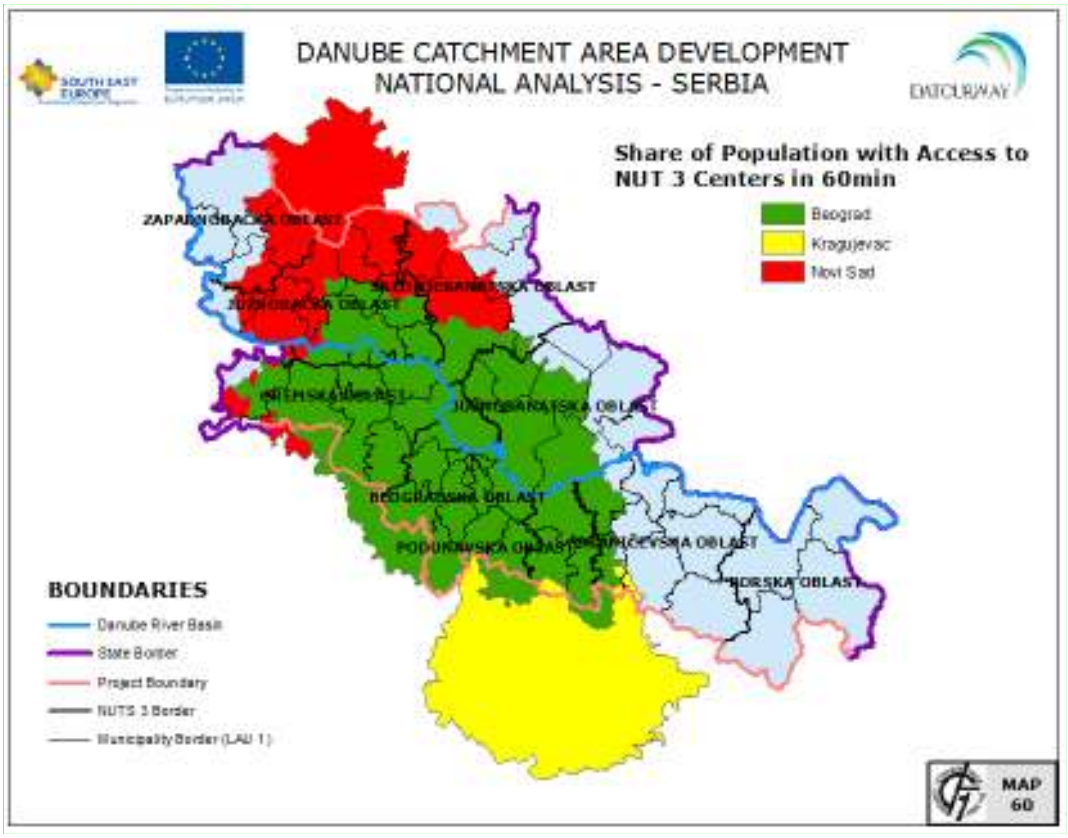
Source: *PE ROS[11] and GIS dataOf PE IUPV*

[11] Public enterprise Roads of Serbia and ITPV

The motorway length are 596 km in the area, which means 94% of the motorways in whole Serbia. The first-class roads[12] are 4430 km long which accounts for 25,96% of the same roads in Serbia.

The sections of greater importance are on the following roads:
DP-1 (E70) section Batrovci – Sremska Raca – Kuzmin – Sremska Mitrovica – Ruma – Pecinci – Simanovci – Belgrade – Ralja – Smederevo –Smederevska Palanka - Velika Plana – Markovac; DP-1.9 (E70) Belgrade – Pancevo – Vrsac – border to Romania DP-22 (E75) (section Srbobran - Novi Sad – Temerin – Beska - Indjija - Stara Pazova - Novi Banovci – Belgrade town – Barajevo – Stepojevac – Lazarevac, DP-17.1 (E662) section border crossing point Batina – Bezdan – Sombor - Svetozar Miletic,

Picture 37. Share of population with access to NUTS3 Centers in 60 min in the Serbian part of Danube catchment area



For known considerations, the transport links between the countries nearby Serbia in border region along the Danube river not existed. Internal ferry lines in past time almost is deactivate, mostly for economical reasons.

The railway network comprises of several main lines: 1nd main line – (E-70): Belgrade - Stara Pazova - Sid – state border with Croatia - (Tovarnik)*;* 2nd main line- (E-85): (Belgrade) - Stara Pazova - Novi Sad - Subotica – state border with Hungary - (Kelebia) 4th main line Belgrade – Nis*;* 6th E-66, Beograd Centar-Pancevo glavna stanica -Vrsac-Drzavna granica-(Stamora Moravita);

Intraregional connections are implemented via *branch lines (*lines branching off the main lines) for the local traffic. The following branch lines are operating in the The Serbian part

12 First class roads in this case means main and regional roads (DP I and II class)

of Danube catchment area*: Mala Krsna – Majdanpek – Bor - Rasputnica 2 - (Vrazogrnac), Ruma – Sabac – Brasina – state border with Bosnia and Herzegovina, Novi Sad – Bogojevo, Pancevo – Zrenjanin - Kikinda – state border with Hungary, Novi Sad – Sajlovo - Rimski Sancevi – Orlovat.*

Water (river) transport

There are four waterways within the Danube area in Serbia, namely Danube, Tisza, Sava and a system of canals Danube – Tisza – Danube, situated in Vojvodina (county of Banat and Backa). Total length of all waterways is 1,385 km (Danube 588 km, Tisza 99 km, Sava 207 km and DTD canals 491 km). Juznobacki and Borski County have the longest sections on the Danube waterway (170 km and 164 km).

Table 24. Length, importance and navigation class by river flow in the Serbian part of Danube catchment area

Name	Length (km)	Importance (international, national, regional)	Navigation class (I to VII)
Danube	588	international	VIc and VII
Sava	207	international	III and IV
Tisza	99	International/interstate	IV
DTD Canals	491	national/regional	IV and V and less

River Danube as European Corridor VII is the strategic link that encourages development of trade, tourism and services. Navigable through the entire territory of Serbia, it participates with 85% in the total freight transportation on Serbian inland waterways. Depending on the sector, the Danube falls into navigable class VIc and VII. From border with Hungary (km 1433) to Pancevo bridge in Belgrade (km 1167) it falls into category VIc, from there to the dam Iron Gate II (km 862) it falls into category VII and then downstream from the Dam to the border with Bulgaria (km 845.65) it falls again into class VIc. International waterway Sava meets requirements for navigable classes III and IV. Tisza is also navigable on its entire course through Serbia. Presently it has a status of inter-state waterway and it belongs to the navigable class IV. Canal System Danube-Tisza-Danube (DTD) is a multipurpose hydraulic system, with main purpose to control the regime of surface and ground water. It provides, however, very good conditions for sailing on 600 km. According to the UNECE criteria, 55% of the system falls into navigable classes IV and V, around 20% into navigable class III, and the remaining 25% in lower classes of navigability. Still, the DTD system is currently in a very poor condition.

Table 25. Waterway features at the level NUTS3 in the Serbian part of Danube catchment area

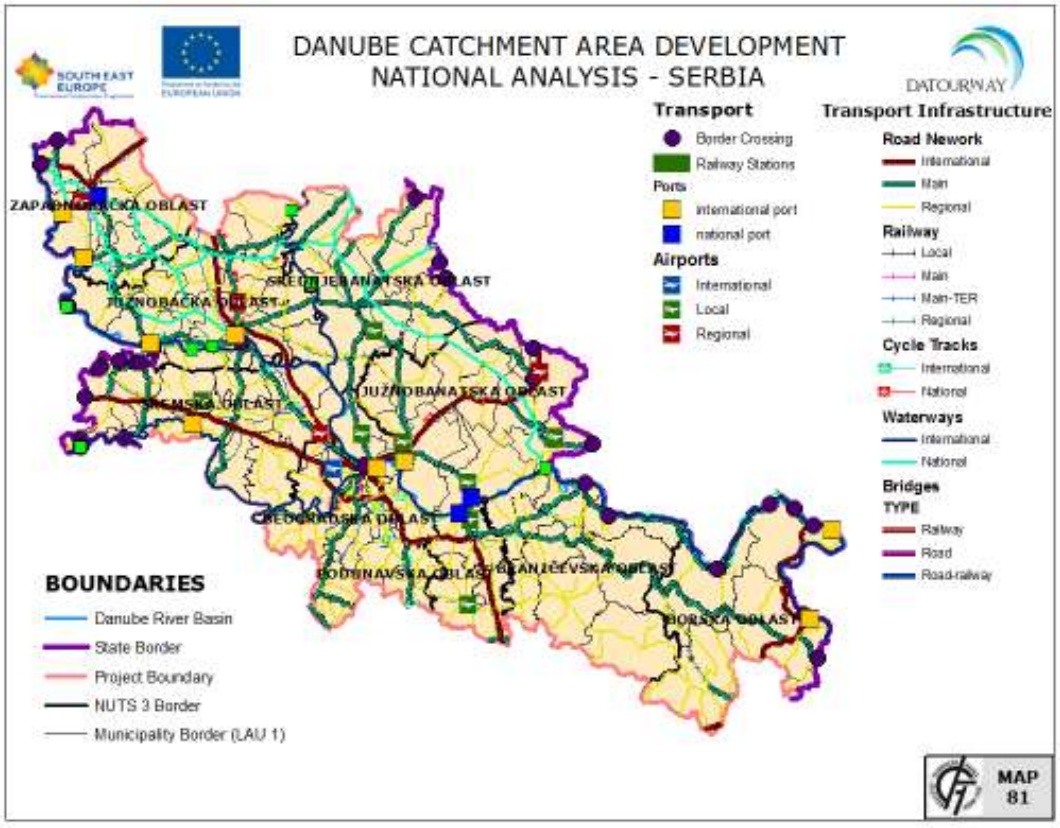
NUTS 3 / Counties	Place	Number of ports	Port type	Port importance
Belgrade	Beograd	1	freight	international
Srednjebanatski	-	0	-	-
Juznobanatski	Pancevo Kovin	2	freight	International local
Zapadnobacki	Sombor, Apatin, Bogojevo	3	freight	local
Juznobacki	Backa Palanka, Novi Sad	2	freight	international international
Sremski	Sremska Mitrovica	1	freight	local
Podunavski	Smederevo	1	freight	international
Branicevski	-	0	-	-
Borski	Prahovo	1	freight	international

Belgrade, Novi Sad, Pancevo, Smederevo and Prahovo are the main international ports along the Danube. Other important ports are Apatin, Kovin, Backa Palanka and Bogojevo on the Danube, Sremska Mitrovica and Sabac on Sava and Sombor on DTD hydro system. Port of Belgrade is the major port in Serbia with the largest annual freight turnover. Ports' infrastructure is however in poor condition. River ports have enough capacity for handling cargo, but do not always have the right equipment, the existing one being old and inefficient.

Air transport is organized via 2 passenger airports – Belgrade and Vrsac.

All counties have at least one airport. However, only Belgrade International airport "Nikola Tesla" provides passenger and cargo transport, Vrsac provides passengers, other airports being for military or civil purposes other than transportation (sport, agriculture, training, tourism).

Picture 38. Transport infrastructure in the Serbian part of Danube catchment area



8.2. Energy infrastructure

Serbian energy policy is primarily based on the Serbian Energy Act and the Energy Development Strategy 2015. Public Enterprise "Electric power industry of Serbia - EPS" (established by Decision of the Government of Serbia, which entered into force on July 1st, 2005) is in charge of electricity generation and distribution on the entire territory of the State.

Electric power generation in Serbia is mainly based on coal (lignite in particular), the hydro potential occupying the second place. JP EPS carries out exploitation of coal in Kolubara and Kostolac coal basins.

Electric Power Industry in the Serbian part of the Datourway includes several economic associations such as: "Thermal Power Plant Nikola Tesla" plc (with the head office in Obrenovac – Belgrade County), "Thermal Power Plants and Mines Kostolac" plc (with the head office in Kostolac – Branicevski County), "Hydro Power Plants Djerdap" (with the head office in Kladovo – Borski County) and "Combined Heat and Power Plants Panonske" plc (with the head office in Novi Sad – Juznobacki County).

The total capacity of all combined heat and power plants is 353 MW and their total annual production amounts to 353 GWh in 2005. Combined Heat and Power Plant "Novi Sad" is a power plant for combined production of electric power, technological steam and heat energy.

Natural gas supply is provided through connection to the main gas pipeline, a fuel oil pipeline transports fuel oil, while the vicinity of the Danube enables comparatively easy supply of this Combined Heat and Power Plant with required amounts of cooling water.

Table 26. Available capacity of the power plants and generated electric energy 2007 in the Serbian part of Danube catchment area

NUTS 3 / Counties	Number	Type	Total available capacity (MW)	Produced energy in 2007 (kWh)	Coal production In 2007 (t)
Belgrade	1	Thermal Power plants Nikola Tesla	1,502	8,752,000,000	
	1	Thermal Power plants Nikola Tesla	1,160	8,620,000,000	
	1	Thermal Power plant Kolubara	245	1,105,000,000	29,255,650
Srednjebanatski	1	Combined Heat and Power plants Zrenjanin	100	50,000,000	
Juznobanatski			-		
Zapadnobacki			-		
Juznobacki	1	Combined Heat and Power plants Novi Sad	208	423,000,000	
Sremski	1	Combined Heat and Power plants Sremska Mitrovica	45	10,000,000	
Podunavski			-		
Branicevski	1	Thermal Power station	281	3,742,000,000	7,251,096
	1	Thermal Power station	640	1,328,000,000	
Borski	1	Hidroelectric Power station	1,058	5,199,000,000	
	1	Hidroelectric Power station	270	1,432,000,000	

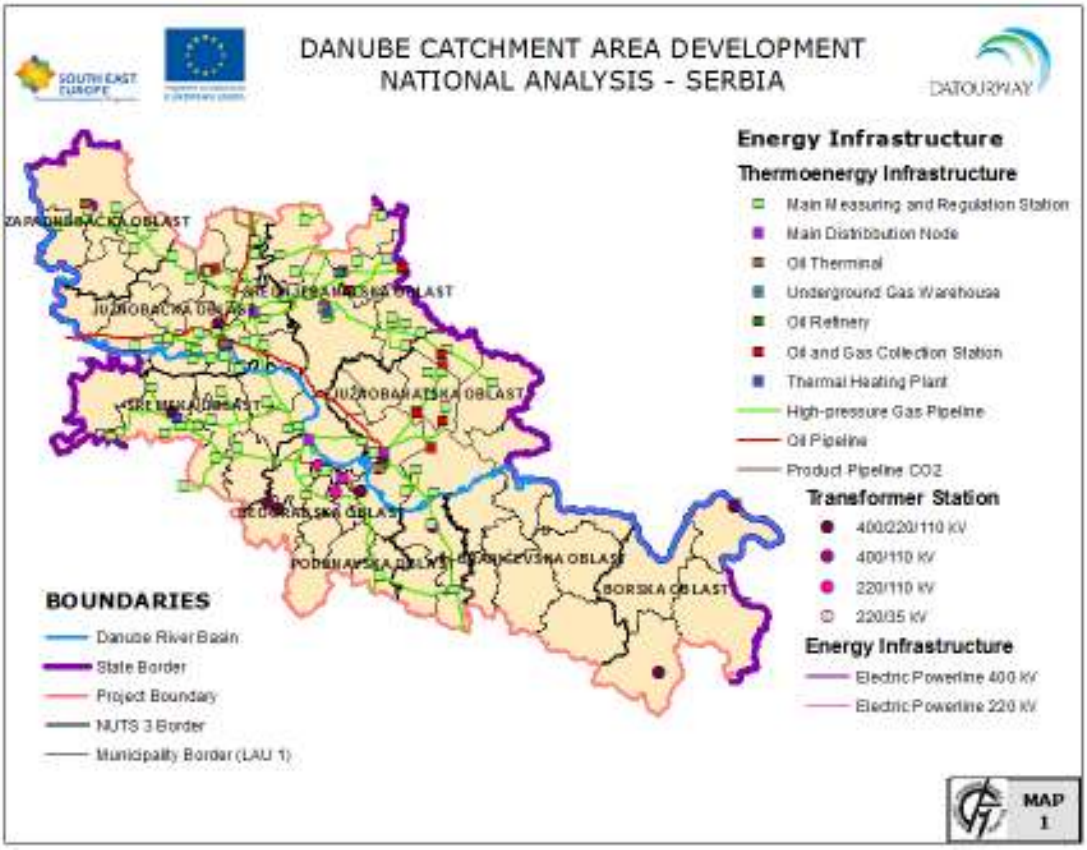
Source: Public Enterprise "Electric power industry of Serbia"

Out of five Economic Associations, four of them perform the power distribution activity in the Danube region, namely:

- Elektrovojvodina plc
- Elektrodistribucija Beograd plc
- Jugoistok plc and
- ED Centar plc.

The total length of all transmission lines in the the Serbian part of Danube catchment area is 3,177 km[13]. Extra high voltage transmission lines (750 kV) do not exist whereas the total length of very high voltage transmission lines (400 kV) is 837 km, the total length of high voltage transmission lines (220 kV) is 517 km and the the total length of low voltage transmission lines (110 kV) is 1,823 km. (Picture 37).

Picture 39. Energy infrastructure in the Serbian part of Danube catchment area



Source: ITPV, 2010

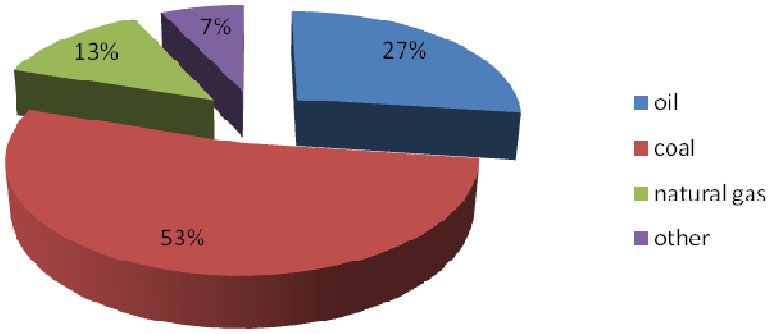
GAS AND OIL SUPPLY AND DISTRIBUTION

State owned company "Srbijagas" is in charge of gas supply and distribution whereas "Serbian Oil Industry - NIS" (owned by the State and Russian "Gasprom") is in charge of oil supply and distribution. Production of oil and natural gas is carried out on 56 oil and gas fields and 139 deposits as wll as from 800 oil and 110 gas wells.

Natural gas is mainly imported from the far Siberian gas fields of Russia whereas 6% of the total gas production comes from domestic gas fields in Banat. Major gas fields in the the Serbian part of Danube catchment area are: Milosevo, Begejci, Zitiste, Srbobran, Ruski Krstur, Medja, Vojvoda Stepa, Rusanda, Banatski Dvor, Tilva, Elemir, Srpska Crnja, Nikolinci and Banatsko Novo Selo.

[13] Calculated in GIS.

Picture 40. Primary energy consumption in Serbia



Source:Ministry of Mining and Energy

Serbian gas pipeline system consists of the main pipeline Horgos-Senta-Gospodjinci-Batajnica-Velika Plana-Paracin-Pojate-Nis, the systems of incoming and distribution pipelines and urban distribution networks of medium and low pressure. Gas system in Serbia is linked to the transport system of Hungary at Horgos, through which Russian gas is imported. Since it is clear that the energy and infrastructure projects can not be closed at borders, the plan is to connect countries in the region. Two main projects in this respect are:

- connection with the gas system of Croatia along the Danube energy corridor near Sotin; and
- connection with the gas system of Romania through section Arad-Mokrin.

Very high-pressure gas pipelines pass through five Danube counties: Belgrade County, Srednjobanatski, Juznobacki, Sremski and Podunavski, while high-pressure gas pipelines pass through Juznobanatski County. Total length of very high-pressure gas pipelines is 325 km and of high pressure gas pipelines 514 km.

Table 27. Length of the gas network in the Serbian part of Danube catchment area

NUTS 3	Transit very high pressure gas pipelines	Very high pressure gas pipelines	High pressure gas pipelines
City of Belgrade	-	80	50
Srednjebanatski	-	81	105
Juznobanatski	-	0	105
Zapadnobacki	-	0	0
Juznobacki	-	96	94
Sremski	-	32	118
Podunavski	-	36	42
Branicevski	-	0	0
Borski	-	0	0

Source: Republic Agency for Spatial Planning – GIS data

The biggest consumer of natural gas is JKP "Beogradske elektrane".

The Energy Development Strategy announces different projects in respect to the extension of existing gas network. In order to increase transport capacity from 6,100 to 6,800 million m^3 *per* year, it is planned to build following section in the Danube area: Becej - Gospodjinci, Gospodjinci – Sombor – Apatin, Gospodjinci – Backa Palanka –

Odzaci, Gospodjinci – Banatski Dvor (in two directions), Tilva – Bela Crkva, Gospodjinci – Beocin, Becej – Novi Becej, Backa Palanka – Sid. Further development of the distribution network will be focused at connecting new households. Construction of new gas storages is also being planned.

National Investment Plan, which is based on the Energy Development Strategy and National Action Plan for the gasification of the Republic of Serbia, will support the construction of a new main gas supply/transportation system (in Vojvodina in total length of 420 km) and reconstruction of underground gas storage Banatski Dvor.

Production of oil is taking place on 52 oil fields located in Serbia and Angola. Major oil fields in the Danube Area are Boka (Srednjebanatski County), Turija (Juznobacki County), Elemir (Srednjebanatski County) and Jermenovci (Juznobanatski County). In Serbia and the Danube area there exist only crude oil pipelines with total length of 253 km. These pipelines pass through three counties: Srednjebanatski (44 km), Juznobanatski (38 km) and Juznobacki (171 km).

The only company in Serbia with an integrated system of production, refining and trade of crude oil and petroleum products is NIS Gazprom Neft (Gazprom neft bought 51% of shares in the state company "Oil Industry of Serbia - NIS" in 2009). NIS refining complex consists of two refineries located in Pančevo (Juznobanatski county) and Novi Sad (Juznobacki county). They produce a range of petroleum products – from motor gasolines and diesel fuel to mechanical lube oils and feedstock for petrochemical industry. Maximum capacity of product lines of both refineries is 7.3 million tons of crude per year: Pančevo up to 4.8 million tons per year and Novi Sad up to 2.5 million tons per year. There is also an LPG production facility, so-called Elemir LPG refinery.

NIS Gazprom Neft supplies 85% of the entire Serbian market at present, the share of imported oil in refined oil being 80%. Its central storages in the the Serbian part of Danube catchment area are located in Prahovo, Smederevo, Belgrade, Novi Sad, Elemir and Sombor whereas oil depot exists only in Novi Sad, with total capacity of 677,000 m^3.

Spatial development concept in the sector of oil industry is based on suggested Pan-European Oil Pipeline (PEOP) that presents a real possibility for delivering Russian oil from the Caspian basin, from the existing oil terminal in the Black Sea port of Constanta through the refineries in Serbia and Croatia to Trieste in Italy. By now, priority is to increase production capacities and modernize refineries in Pančevo and Novi Sad with intention to increase the quality of final products in line with the Euro 5 standard.

TELECOMMUNICATION NETWORK

Development project of the "Electric power industry of Serbia" (EPS) telecommunication network, primarily based on the application of optical cables along power lines, was supported through favourable credits approved by the European Investment Bank (EIB). By the end of 2007, some 3.100 km of regional optical network were realised along transmission lines of the Serbian power system.

EPS telecommunication networks are connected with the networks of neighbouring countries through Optical Ground Wire Cable, placed above transmission lines between interconnection facilities, with the transmission systems of synchronous digital hierarchy. The total length of fibre optic cables in the the Serbian part of Danube catchment area is 330 km. These cables pass through six counties: City of Belgrade (29 km), Juznobanatski (98 km), Zapadnobacki (62 km), Juznobacki (66 km), Sremski (67 km) and Borski (8 km).

FIXED AND MOBILE LINES

In the recent period, the development and the improvement of the telecommunication system on the planned territory was implemented mainly according to the General plans of the telecommunication network of the competent companies. New capacities were built alongside the main ones, as well as traffic directions of lower rank down to the municipal ones, and the optic cable was used as the main media in addition to the existing cable connections and the PP system. In larger urban centres, and in many smaller ones (down to rural settlements), in the recent period, digital switching systems were provided, achieving a significant enhancement of the network's capacities, high quality, reliability and availability, and also the introduction of up-to-date postal services (broadband services).

Table 28. Data on the number of the users and the service type on the territory of AP Vojvodina

Service type	In 2005/2006	
	Total number of users	Number of users in urban areas
PSTN telephone system	738.227	590.582
ISDN Basic Access	13.887	13.193
GSM	600.000	300.000
GPRS	60.000	60.000
EDGE		
IP Phone System (VoIP)		
Video Phone System		
Video Conference		
ISDN Primary Access	500	500
UMTS	100	100
ADSL	1.048	1.048
VDSL		
Triple-play (Internet, TV, telephone)		
Rapid data transmission without Internet, up	300	250
Data transmission without Internet at speed	20	20
Data transmission without Internet at speed up to 20 Mbit/s		
Internet access at speeds up to 2 Mbit/s	67172	44782
Internet access at speeds from 2 Mbit/s to 20 Mbit/s	6	3
Internet access at speeds over 20 Mbit/s		
Virtual private networks (VPN)	13	11
Distribution of TV signal up to 10 channel		
Distribution of TV signal from 10 to 75	283.575	180.236
Distribution of TV signal over 75 channels		
IP TV		
Video on Demand		
E-commerce, e-banking, etc.		
E-management		
E-learning		
E-medicine		
Video surveillance		
Remote control in industrial plants		
Interactive games		
Private video transmission		
Distribution of music and sound signal		
High-definition television		
Interactive digital television		
Web/mail hosting services	160	150
Frame Relay	450	

Table 29. Percentage of users per counties on the AP Vojvodina part of the Serbian part of Danube catchment area[14]

County	In 2005
Juzna Backa	33.7 %
Zapadna Backa	10
Srednje Banatska	8.7
Juzno Banatska	14,8
Sremska	15,9
Number of companies – service providers	6

The presented percentage distribution per counties indicates that development is not balanced, respectively. The Juzna Backa County with its seat in Novi Sad is significantly more developed than other parts of AP Vojvodina. The reason behind this division should be looked for in the economic development of the Juzna Backa County.

Analysis of the number of narrowband and broadband Internet access users in AP of Vojvodina.

Table 30. presents the state of the numbers of active landline telephone connections per 100 residents and the number of telephone connections per household.

Table 30. The number of active landline telephone connections on the AP Vojvodina part of the Serbian part of Danube catchment area[15]

County	Population rate (the 2002 Census)	The number of telephone connections (31 December 2006)	Number of telephone connections per 100 residents	The number of telephone Connections per household
Juzna Backa	593666	246565	41,5	1,2
Zapadna Backa	214011	76219	35,6	1,0
Sredje Banatska	208456	73300	35,2	1,0
Juzno Banatska	313937	105633	33,6	0,9
Sremska	335901	114983	34.2	1,0
Vojvodina	2031992	738226	36,3	1,0
The City of Novi Sad	299294	157093	52,5	1,5

According to the available data, the EU27 average is that 72% of households own a fixed telephone line and about 50 telephone connections per 100 residents (E-*Communications Household Survey).* The number of connections per 100 residents falls behind the EU27 average, but in relation to the neighbouring countries the relation is better than their average.

The chart presents the use of Internet with the dial-up access. The EU27 average amounted to 13% in 2006, which is by 3% less than in 2005. The actual percentage of the number of households using the dial-up Internet access is on the level as in the EU27, but the problem presents half the total percentage of Internet users.

[14] Source- Regional Spatial plan of AP of Vojvodina, Draft, ITPV,2010,
[15] Source- Regional Spatial plan of AP of Vojvodina, Draft, ITPV,2010,

Table 31. The use of Internet with the dial-up access on the AP Vojvodina part of the Serbian part of Danube catchment area[16]

County	Per 100 residents	households (%)	Percentage in relation to the the number of telephone connections (%)
Juzna Backa	7,90	22,23	19,01
Zapadna Backa	3,33	9,37	9,35
Srednje Banatska	3,78	10,63	10,74
Juzno Banatska	1,99	5,60	5,92
Sremska	5,02	14,14	14,68
Vojvodina	4,72	13,Ч0	13,00
The City of Novi Sad	10,02	28,22	19,10

Research indicated that dial-up Internet users dial more often the 042 numbers than the direct access numbers of the Internet provider. As much as two-thirds of Internet users use the Internet through dial-up access.

Average in Internet use in households of the AP Vojvodina, falls behind significantly with relation to the EU27, where it amounts to 44%. The city of Novi Sad, as a separate entity, is the only one that has an average above the mentioned one. The obtained results point out significant differences between the counties and the uneven development towards the IT society.

Table 32. Internet use in the AP Vojvodina on the AP Vojvodina part of the Serbian part of Danube catchment area[17]

County	Per 100 residents 2006. in 2006	Households in 2006 (%)	Per residents 2007. in 2007	Projection of households at the end of 2007 (%)
Juzna Backa	12,11	34,09%	14,60	41,10%
Zapadno backa	5,15	14,49%	6,18	17,39%
Srednje banatska	5,26	14,80%	6,63	18,65%
Juzno Banatska	2,61	7,36%	5,06	14,24%
Sremska	6,26	17,62%	8,47	23,85%
Vojvodina	6,94	19,52%	9,09	25,59%
The City of Novi Sad	17,53	49,36%	21,30	59,95%

Table 32. indicates the state of the number of users that have the option of Internet access at speeds equal to 64 kbit/s or higher. In relation to 2005, the state in this area is slowly changing, with improvements to be expected in the second half of 2007. In relation to the EU27, where the average per 100 residents amounts to 16,9 i.e. 28% for households, the AP Vojvodina falls dramatically behind. In this case, the City of Novi Sad has almost reached the same average as the EU27. With this data, the Juzno backi sounty is also approaching the latter average. The overall poor situation and the extremely uneven development rate within the AP Vojvodina, present a concerning matter.

[16] Source- Regional Spatial plan of AP of Vojvodina, Draft, ITPV,2010,
[17] Source- Regional Spatial plan of AP of Vojvodina, Draft, ITPV,2010,

Table 33. Internet access at speeds totalling 64 kbit/s or greater AP Vojvodina part of the Serbian part of Danube catchment area[18]

County	Households In 2005 (%)	Per 100 residents In 2006	Households In 2006 (%)	Projection per 100 residents at the end of 2007	Projection of households at the end 2007 (%)
Juzna Backa	2,53	5,22	14,70	7,92	22,31
Zapadno backi	3,20	3,59	10,09	7,52	21,16
Zapadno backi	2,09	2,25	6,33	3,37	9,47
Srednje banatski	1,18	1,92	5,40	3,40	9,57
Juzno Banatski	1,38	0,84	2,37	3,49	9,83
Sremska	0,94	1,76	4,94	4,15	11,70
Vojvodina	1,81	2,79	7,85	5,12	14,42
Novi Sad The City	4,64	8,97	25,26	13,05	36,74

Services of mobile telecommunications have been introduced to the largest part of AP Vojvodina via radio transmission, and to a minor extent, also via optic cables and by constructing radio relays and radio base stations.

9. CONFLICT AREAS: TOURISM – ENVIRONMENT

Activities for tourism development (mainly by building tourism infrastructure) in destinations located in nature poses the danger of conflicts of interest related to environment damage and infringement of the sustainable development requirements. It does not mean that tourism development should be stopped but rather that it should be organized in a way so as to avoid any environmental conflicts.

Overcoming the main conflict areas tourism - environment primarily relate to:

- Protection of the Danube river water and reduction of water pollution

A major problem with water quality in the Danube region in Serbia is that waste water from urban areas is not fully covered by sewage treatment plants and wastewater (WWTP). The condition of existing sewerage systems in many urban areas is unsatisfactory - the networks are obsolete, and in many localities there is a lack of WWTP built.

Along the Danube there are distortions and fragmentation of habitats and habitats of plant and animal species and changes in ecosystems in the region resulting from increased urbanization in the region, the extraction of minerals in the river basin area, cutting of vegetation, drainage of floodplain areas and ponds. The intensive agriculture in the region, pollution of soils and aquatic ecosystems, the disturbance of habitats, destruction of nesting sites and the introduction of alien species leading to loss of biodiversity.

[18] Source- Regional Spatial plan of AP of Vojvodina, Draft, ITPV,2010,

For the last century wetlands in the Danube region is significantly decreased. Marshes and wetlands are most affected. From more than 20 Danube marshes are now reserved only some of them, Gornje Podunavlje, Obedska bara, Carska Bara and others. With the destruction of wetlands has significantly decreased the number of colonies of herons and cormorants and other bird species and populations of many amphibians and invertebrates. Only wetlands provide life so many folcks of large birds in small space. Of 400 European bird species to 170 is completely or partially related to wetlands.

This requires the implementation of measures related to integrated planning and management of the river area with a set of interventions on infrastructure and technology for environmental protection such as wastewater treatment plants, waste management, sanitation, soil treatment, water treatment, supply of technical equipment for effective control of water pollution of river systems for environmental management of ports in the Serbian section of Danube, integrated management of water treatment infrastructure and waste management.

This conflict reflects the importance of the area of environmental protection, biodiversity and ecological balance of the whole the Serbian part of Danube catchment area. The interventions are associated with general vision of the Danube all partners to preserve the environment and natural resources along the Danube and the sustainable development of the region in which urban and economic interventions are not at the expense of ecological status.

- Improving the local natural and urban landscapes.

Currently Serbian localities along the Danube were turned back to the river. It is necessary the development of Danube settlements to become organic unity with the river. In urban master plans should lay down specific measures to liberalize the coast of abnormal activities, construction of specific bank and ensembles from the river, typical silhouettes.

10. CONFLICT AREAS: TOURISM –HUMAN RESOURCES

One of the conflicts of interest is between the need of employees guaranteeing high-quality services in tourism (the tourist product offered) and the quality of education and qualification training of the employed in tourism. This gap can be noticed in the following in particular:

- Few of the potential employees trained in vocational schools have good command of foreign languages with the exception of tourist guides, manages and some of the hotel staff. In large cities such as Belgrade and Novi Sad, there is good quality of workforce in tourism sector, so this gap is more evident in small municipalities with tourist functions;
- Certain types of tourism with the best prospects for development in the The Serbian part of Danube catchment area (rural, ecological, cultural, tourism of special interests, religious, etc.) lack an education system for potential employees. The only exceptions are the Faculty of Sciences which has departments for special forms of tourism and Economic faculty of Belgrade;
- In Serbia is lack of well educated employees for dealing with projects in tourism sector. This is proved by the small number of well-prepared and well-grounded projects for financing by various beneficiaries from small municipalities with prospects for the development of such tourism.

11. INFRASTRUCTURE BARRIERS

Conflict of interests along the lines of tourism and infrastructural shortages

These conflicts of interests are due to the fact that there is certain imbalance between the creation of the necessary tourism infrastructure and the scope and attractiveness of the available tourism resources in certain parts of the Serbian part of Danube catchment area. This is primary related to small municipalities with tourism potential. There is also a conflict of interests related to the gap between "tourism resources/auxiliary infrastructure (transport, energy, water supply, etc.". The lack of good-quality road infrastructure with roads allowing quick and convenient access to tourist sites hampers the prospects of expanding the scope of tourism destinations to include also smaller municipalities and tourism centres.

There is a lack of good transport connectivity between Serbian and Croatian border region of the Danube, which is crucial for successful economic development of the Danube region as a whole.

Conflict of interests between tourism and regulation

One of the respective conflicts of interests is related to the omissions in the straightforward regulation of activities pertaining to tourism development and the protection of environment, cultural and historical heritage, rural tourism, etc. The biggest problem is the lack of Regulations and related legislation and standardization of business of renting rooms in home villages. There is also absence of adequately regulated plan of giving the concession part of Area that could be used in tourism sector. That is especially pointed to the absence of criteria and standards to be taken into account in the creation of eco-trails and other specific infrastructure for ecological tourism.

Another conflict of interests is due to the lack of clarity about the ownership of eco-trails (municipalities, tourism companies, State Forestry Stations, etc.) and the ensuing conflict of interests related to the liability for their maintenance and for tourists' safety.

12. SWOT ANALYSIS

The SWOT ANALYSIS is focusing on the status and opportunities for the development of tourism sector in the Serbian The Serbian part of Danube catchment area.

Strengths	Weaknesses
• A good resource potential for tourism development, with its variety of rivers Danube and its tributaries • Favorable geographic position-river Danube Serbia joins the EU Member States: Hungary, Austria, Bulgaria, Romania • Full flow of the Danube through Serbia is rich in very beautiful panoramic views, places of rich cultural and historical heritage and gastronomy, which represents good potential for development of river tourism Large urban agglomerations Belgrade and Novi Sad, with its unique location on the Danube are a very suitable place for development and international commercialization of tourism products	• Insufficient development of existing infrastructure and superstructure for the development of nautical tourism • Lack of accommodation and catering facilities with adequate level of servicing • Unused tourism potentials • Lack of adequate strategies for the development of Danube Municipalities • The complicated and expensive procedure of obtaining permits for the construction of marinas on the Danube • Slow entrepreneurial restructuring and under- representation of SMEs in tourism • Decline of the importance of agricultural production and the inclusion of agriculture in tourism resources

Multiculturalism in counties in Vojvodina is significant potential for development of additional tourist attractions • Positive image of Serbia as a Danube country conveys a positive attitude of local people to turn in tourist flows • Image of relatively cheap, peaceful and safe tourist destination • Well-developed educational infrastructure (in the Danube municipalities- especially in Belgrade and Novi Sad), profiled in the preparation of personnel for tourism • An increasing number of projects for the development of tourism products in Danube area in Serbia- outlined a trend of increasing number of projects related to development of different forms of tourism in the municipalities of the Serbian Danube area • Relatively well- developed regional cooperation • Good conditions for agricultural production and food industry	• Lack of knowledge and insufficient level of awareness and promotion of nautical tourism products Unfinished strategies for sustainable development and the lack of a comprehensive approach to environmental protection • Lack of extra services: school fishing, river boating courses
Opportunities	**Threats**
• Attracting foreign investment in infrastructure and tourism Simplification of procedures for obtaining permits for the construction of marinas • Improving collaboration between private, public and NGO sectors particularly in tourism and environmental protection • A policy for wider use of the capabilities of the Danube river as an integrating factor for cross-border and transnational tourism development, linking the tourist markets of Danubian countries and development of common tourist products • Encouraging the development of economic sectors directly linked to the development of different forms of tourism (wine and grape processing, food industry, handicrafts, commerce, etc.). • Using the opportunities of EU funds and individual donor programs for the implementation of projects in tourism • Using the opportunities of EU Strategy for Danube region.	• Slow economic development, unstable political situation and poverty that domestic demand is too long kept at a low level affects tourism • Disposal and under-use of EU funds • Lagging behind the neighboring regions (in Hungary, Romania and Bulgaria)- export of labor, slow construction of traffic and tourist infrastructure • Lack of motivation of local authorities to use the resources available for development of tourism sector • Continuing underestimating the potential of public-private partnership for the realization of the major projects in tourism in the smaller municipalities near Danube