DONAUREGIONEN PLUS

ANNUAL REPORT 2010

Content

1. Introduction

1.1. Project purpose description

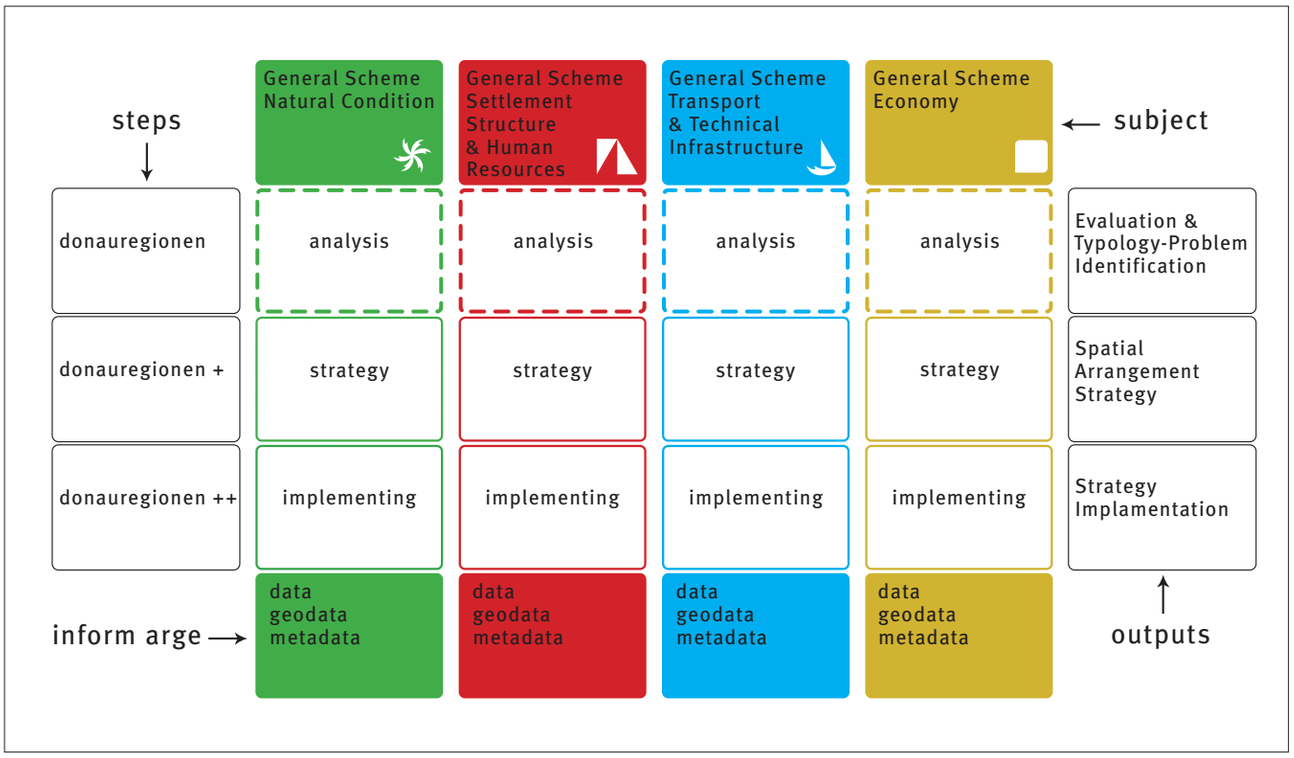
The project origin arises from the ARGE DONAULANDER - Working Group of spatial planning (ARGE) where since 1993 the idea of the Concept of the cooperation of the Danube regions, cities and ports was permanently developed. Up to now the common methodological model was elaborated and approved by the ARGE members. The model consists of three phases. Each phase is divided into four sector general scheme namely sectors of (a) Environment, (b) Settlement Structure & Human Resources, (c) Transport &Technical infrastructure and (d) Economy. Each phase ends with integration of particular sector approaches. According the ARGE plan the Donauregionen project, which was implemented in InterregIIIB CADCES programme represents the 1st - analytical phase. Project Donauregionen+ represents 2nd - synthetic phase with Joint Danube Regions Development Strategy (D+ strategy) as main project objective.

1.2. Objectives

General objective of this phase of the ARGE DONAULANDER concept is the description of the potential of the middle a lower part of the Danube and its importance for the Europe as an important development corridor. The specific objective represents elaboration of the Joint Donauregionen Development Strategy (D+Strategy), having in mind the scenarios of the ESDP for this part of Europe. This requires common cooperation of planners of involved countries based on ARGE. The specific objective of the project will be achieved through the combination of (1) bottom-up approach activities based on identification and evaluation of existing strategies (1a) of Danube NUTS3 regions, (1b) of existing Euroregions and (1c) of bigger Danube cities and ports and (2) the top-down approach activities connected with identification and evaluation of relevant spatial planning and regional policies, documents and systems of (2a) European and (2b) national importance.

Project represents an attempt of integration of existing relevant European, national, regional and key local strategies in order to support Danube regions, towns and ports, which are in bad economic situation, but have the potential for sustainable development as centers or ports of the Danube. (see Area of Interest)

ARGE DONAU Matrix

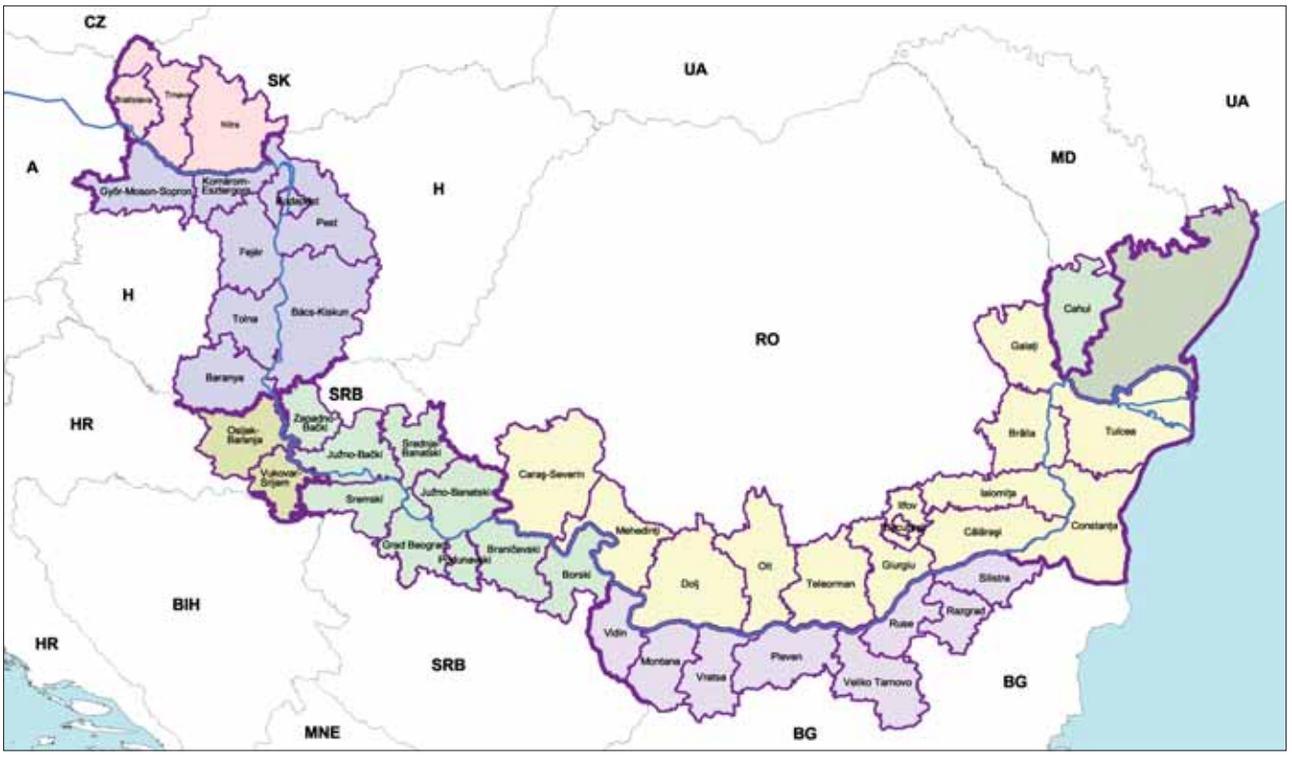


1.3. Structure

The list of activities realized in 2010, divided according to work packages (WP) is as follows:

- WP1
- 4 workshops have been realized
- Updating of Project methodology
- Updating of Project terminology
- Elaboration of 12 Monthly partner reports
- Elaboration of 2nd, 3rd (3.1) and 4th (3.2) Partner Report and Declaration of Validation
- Working meetings in all project countries
- WP2
- Permanent update of the Project WEB page (D+WEB)
- WP3
- Elaboration and development of specific WP3 methodology
- GIS data collection and GIS database development
- Further development of D+WEB Server
- Further development of D+GIS Server
- Development and verification of transport accessibility model
- WP4
- Development of WP4 form on D+WEB Server
- Completion of text parts of the General Schemes reports
- Draft Final Report elaboration
- Completion of data collections (text and indicators) on the project D+WEB Server
- GIS data verification
- WP5
- Development of WP5 forms on project D+WEB Server
- Elaboration of WP5 methodology and preparation of example for Slovakia and Hungary regions
- Elaboration of WP5 guide of methodology
- D+WEB Server application data filling
- WP6
- Preparation Works on WP6
- Realization of 1st Cross-Danube-Strategy (CDS) workshop SK-HU in Slovakia
- Elaboration of WP6 guide of methodology
- WP7
- Preparation of WP7 methodology
- Preparation of the analysis and comparisons for each ARGE subregion for each country
- Preparation of National Background reports by responsible project partners
- Elaboration of WP7 guide

Area of interest



1.4. Timeschedule

Table 1 -D+ Time Schedule

Work packages and Activities	2010											
WP1 –Project Management and Coordination												
1.1 Project Administration												
1.2 Terminology												
1.3 Planning Methods												
1.4 Partnership Development												
1.5 Workshops												
WP2 – Communication and Dissemination												
2.1 Project WEB and Logo Development												
2.2 Publicity												
2.3 Public Events												
WP3 – Project Data and GIS Development												
3.1 DonauDatenKatalog												
3.2 GIS Development												
WP4 – Analysis Completion												
4.1 Natural Conditions												
4.2 Settlement Structure and Human Resources												
4.3 Transport and Technical Infrastructure												
4.4 Economy Structure												
4.5 Comprehensive Evaluation and Typology of Regions												
WP5 – Sector Strategies Development												
5.1 Natural Conditions												
5.2 Settlement Structure and Human Resources												
5.3 Transport & Technical Infrastructure												
5.4 Economy Structure												
WP6 – Crossdanube Strategy Development												
6.1 Development Strategy for Subregion ASH												
6.2 Development Strategy for Subregion HCS												
6.3 Development Strategy for Subregion SRB												
6.4 Development Strategy for Subregion RB												
6.5 Development Strategy for Subregion RMU												
WP7 – Comprehensive Strategy												
7.1 Analysis and Comparison												
7.2 Scenarios												
7.3 Conclusions and Recommendations												

2. WP1 – Project Management and coordination 2010

2.1. Project administration

Administration of the project inclusive management, coordination activities, financial management and preparatory of necessary documentation is a very important part of project implementation. During the year 2010 each project partner had to prepare their partner reports for the 2nd, 3rd and 4th project period. On the basis of these partner reports the Lead Partner prepared and submitted 3 Progress reports and Applications for Reimbursement in this year. To facilitate their work with the partner report, each project partner has monthly prepared their own Monthly Partner Report and submitted it to Lead Partner.

Successful D+ project coordination and management required organization of operative meeting in order to achieve reasonable implementation of the project activities. During 2010 there were realized 10 Controlling and Coordination Work Meetings between the Lead Partner and Project Partners.

In November 2010 the Lead Partner Seminar for communication activities took place, which aimed to inform lead partners about the communication rules and possibilities within SEE projects, whereas the SEE insists on presentation and publication of project results. At the beginning were presented the main goals of the SEE program and it's communication action tool. Consequently there were presented communication activities of some projects, including Donauregionen+ project (D+). This activity is close to WP2 – publicity and public events.

Within financial management of the project there were several activities concerning the budget changes, reallocations between BL and WP's as well as preparation of project modification related to the budget changes between project partners.

Realization of workshops also helps the proper coordination of the project. Due to the fact that it's organized every 3 month the implementation of project activities is more integrated.

2.2. Terminology

Terminology represents elaboration of project vocabulary of relevant planning terms compatible with planning systems in all involved countries. The vocabulary concentrates on the terms used in the project documents. Terminology serves for a clarification of planning terms in individual countries. The content of the project vocabulary is updated permanently till end of project duration and is available on the D+WebServer.

2.3. Methodology

This project follows and further develops the methodology of project Donauregionen. General D+ methodology elaboration was one of the first tasks at the beginning of the project. In the year 2010 was the approved methodology further developed and modified according to proposals of responsible project partners in specific WPs. Methodology serves as a guide for elaboration of individual WPs and respective activities. The methodology is available for project partners at the D+WebServer. Similarly as the terminology section, the methodology one is permanently updated, but each change should be previously discussed and approved on the D+ workshop.

2.4. Building partnership - Steering committee activities

During the 2010 due to Act of competence there was a transition of Lead partner from Ministry of Construction and Regional Development of the Slovak Republic to Ministry of Interior of the Slovak Republic in July 2010. The same year, in November, after the parliamentary elections and setup of the new government, the LP passed again from Ministry of Interior of the Slovak Republic to the new Ministry of Transport, Construction and Regional Development of the Slovak Republic.

The D+ Project Steering Committee (PSC) is responsible for the systematic control and decision making process of project activities and responsibilities of the project partners. It is composed of 9 members represented each participated country in the project plus LP. There were 2 PSC meetings in the year of 2010, namely on the 4th and 6th workshop. The 3rd PSC meeting dealt with solving of problems concerning of workshop organization. The PSC also approved the all administrative and managing activities including the deadlines of these works.

On the 4th PSC meeting were resolved administrative changes connected with the changes of name of the institution of the lead partner. The PSC also discussed the changes of the involvement of individual Ukrainian project partners in D+. The possibilities of reallocation of the budgets between the sponsoring partners and changes of sponsoring rules have been discussed. This meeting was also focused on approval of the 2nd budget reallocation. PSC has reminded the project partners not to forget to report about their administrative and other planned changes.

2.5.Workshops 2010

There were realized 4 workshops of the project Donauregionen+ In the year 2010, specifically the 4th, 5th, 6th and 7th.

One of the objectives of 4th workshop of Donauregionen + project, was to present the current state of “until now achieved” results of each workpackages (WP). It was held on 16th – 17th March 2010 in Budapest, organized by ERDF PP5. On the workshop there were proposed, discussed and adopted concrete measures for further project implementation. The workshop was specifically focused on discussions of the methodology of Sectoral Strategy Development (WP5), as well as Cross-Danube Strategy Development (WP6). The attention was paid on presentation of case studies of model area Nitra County on Slovak side and Komárom-Esztergom County on Hungarian side. There were also presented the concrete steps of work within WP6 – CDS Development and WP7 – Comprehensive Strategy in the Donauregionen area.

The fifth workshop of the project Donauregionen + was focused on the presentation of the achieved goals, current state of individual work packages (WPs) with special emphasis on WP4 - assembling of analysis. It was held on the 2nd – 3rd June 2010 in Bucharest. The organizer was

the ERDF PP9. On the workshop each project partner presented their previous work from the beginning of the project as well as the progress of work within each general scheme. There were also agreed specific Conclusions and Recommendations till next workshop.

The sixth workshop of the Donauregionen + project aimed to present the current state of the various semi-finished work packages (WP), with an emphasis on WP4 - Analysis completion and WP5 - Sectoral Strategy Development. The place of that workshop was on 15th – 16th September 2010 in Novi Sad, Serbia, organized by 10% PP6. On this workshop the actual project and budget questions were also clarified. The GIS expert presented the methodology and development of project data as well as the Geodatabase structure. Also the guide for WP6 – Crossdanube strategy development was presented.

The seventh workshop was dedicated again to solving the final issues concerning the WP4 – Analysis completion. Moreover this workshop was focused also on state of project work within various work packages (WP), specifically WP5 - Sectoral Strategy Development, WP6 – Cross-Danuber Strategy Development and WP7 – Scenarios. This workshop, organized by ERDF PP2 was held on 24th and 25th November in Bratislava, Slovakia. There were also discussed and adopted concrete modifications of the project. The LP informed about the administrative changes of the project and also about the Progress reports and the current state of transferred budget to each project partner.

3. WP2 –Communication and dissemination 2010

3.1. Project web and logo development

donauregionen+

The core of WP2 represents setting up of the project communication system and dissemination of its outputs and results. It includes the project website development as well as the design of the project graphical visual system – project design manual (logo, structuring, graphical elements, fonts etc).

An important tool of communication between project partners is the project website (D+Web), which was establish in year 2009 and in the year 2010 has been updating and developed. It has basic informative part, which is in the 1st phase implemented as static project website (www.donauregionen.net) concentrated on project administration, coordination, documentation of project events and outputs.

Within the WP2 a dynamic website – D+Web server has been created. It involves two special modules:

- GIS server module (D+GISServer) which enables to present GIS data and support to elaboration of geographic analysis of involved partners, especially on Cross-Danube regions and ARGE sub-regions.
- Portal module (D+WebServer), with several submodules for information support of specific project WPs, namely:

- WP1 (terminology and methodology supporting modules)
- WP2 – support of CAP implementation, it is expected the content of "static D+ webpage will be in further steps of the project integrated in the project D+WEB Server
- WP3 (meta-information module – project database – which will continue in development and update of metainformation databases about relevant planning links (datasources, bodies, institutions and planning documents and reports).
- WP4 (collection od data, comparative and clustering modules)
- WP5, WP6 and WP7 modules.

3.2. Publicity – Dissemination

On 16th September 2010 in Novi Sad the government of Vojvodina arranged a press conference on the occasion of completion of the 6th workshop of the project. About the importance as well as the basic information and the achieved results of the project presented Boris Barjaktarović and Roland Kókai from the Provincial Secretariat for Interregional Cooperation of Vojvodina, the representative of Lead Partner (Ministry of Interior of the Slovak Republic on time) Tibor Németh and representative of the Republic Agency for Spatial Planning Tijana Zivanovic.

Concerning other publicity activities the Design Manual of the project was elaborated and updated. Also there were press conferences of several project partners. But the mainly publicity is made through the D+WEB Server, as well as by the individual web pages of each project partners, where they put relevant information about the implementation of DONAUREGIONEN+ project.

In 2010 there was the printout of Project Annual Reports 2009 and also the reprint of outputs of the previous project – DONAUREGIONEN, which was used for several public events, inter alia on the TCP SEE Annual Conference, Third Conference on the EU Strategy for the Danube Region or on LP seminar in Budapest.

3.3. Public events

In the year 2010 there were several public events organized. On 20th – 23rd September 2010 held the TCP SEE Annual Conference in Thessaloniky, Greece. The aim of the Conference of South East Europe – TCP SEE was to evaluate the transnational cooperation as a strategic tool for regional developments in the SEE. On the conference attended more than 300 participants including representatives of the European Commission, regional and local governments, officers and experts from the SEE region. First day of conference aimed to provide a strategic perspective on transnational cooperation in Southeast Europe, with emphasis on the role and future of the SEE. In this first day took place also the exhibition of SEE project, including project Donauregionen+.

Besides mentioned Annual conference in Greece, project Donauregionen+ was presented also on the Third Conference on the EU Strategy for the Danube Region in Bratislava on May 2010. The objective of this conference was to discuss the issues of transport, energy, urban areas, environment and information society. The audience of the conference was made up of representatives of authorities at EU, national and regional level, as well as a wide range of stakeholders of the Danube region.

4. WP3 – Project data and GIS development 2010

Activities realized during year 2010 within WP3 – Project data and GIS development:

- Finalization of WP3 methodology with specific attention on the required GIS data structure,
- Collection of GIS data and GIS database creation,
- Create the model of time accessibility,
- Development of the project portal.

General status description of data collection in form of table and relevant description:

Table 2 Share of data collection

General Scheme	Slovakia	Hungary	Croatia	Serbia	Bulgaria	Romania	Moldova	Ukraine
Nature Conditions	100%	50%	25%	90%	90%	90%	50%	25%
Human Resources & Settlement Structure	100%	90%	90%	100%	95%	90%	90%	60%
Transport & Technical Infrastructure	100%	50%	80%	90%	75%	80%	60%	60%
Economy	100%	100%	100%	100%	100%	100%	80%	80%

4.1. DonauDatenKatalog

DonauDatenKatalog represents strategic information system focused on collection and storage of metadata about relevant information sources for planning activities in Danube space.

The Meta information system is object oriented and contains different information depending on object class:

- Datasets,
- Organizations,
- Persons,
- Services,
- Documents,
- Applications (software),
- Events.

During the year 2010 the official metadata built in previous project Donauregionen were obtained. Now the metadata are analyzed to simplify and update the database structure including data itself to develop the new DonauDatenKatalog.

4.2. WP3 GIS Methodology

The elaboration of project Geographical Information System (GIS) is based on the following pillars:

- Orgware,
- Basic Applications,
- Database Structure,
- Software and Hardware.

Orgware is represented especially by the non formal working group(s) for GIS development which was created during project workshops.

Basic applications are based for each of four General Schemes focused on:

- Natural Conditions,
- Settlement Structure and Human Resources,
- Transport and Technical Infrastructure,
- Economy.

They are represented by the set of specific map projects for ArcGIS Desktop and web services and applications for ArcGIS Server to support the main General Scheme map outputs defined by methodology and data base structure.

Database structure was based on the available data from previous Donauregionen project and then more specified by working group and summarized in a methodology. The methodology described GIS datasets, layers and relevant attribute data for each General Scheme. Both of them can be considered to be finished but minor changes are expected during the next project progress mainly on work packages WP5, WP6 and WP7. The current version of methodology is available on http://dplus.infoprojekt.sk/WP1/Methodology/WP3GIS/32GISdevelopment.aspx.

Time Accessibility Model represents the special data structure which was developed for modeling time and / or distance accessibility for different transport networks. It was developed especially for spatial delimitation of core areas of Cross Danube regions. It was verified on road network of relevant Slovak NUTS3 regions.

Practically all territorial and regional planning data from five former project partner countries Slovakia, Hungary, Serbia, Bulgaria and Romania were updated. Also the data from three new partner countries Croatia, Moldova and Ukraine were completed and stored.

According the project geographical database structure the data are now stored in shapefile format in two-dimensional geographical coordinates (longitude, latitude), decimal degrees with fraction. Finally these data should be transferred into personal or file geodatabases. The spatial reference system is ETRS 1989 (WGS 1984) with ellipsoid GRS 1980. The output projection is ETRS 89 Lambert Azimuthal Equal Area in scale precision up to 1:200 000.

Software for GIS is based on ESRI world wide ArcGIS products. ArcGIS Desktop (ArcEditor and ArcView) is used especially for spatial data collection, elaboration, storage, update, querying, analysis and presentation mapping services. ArcGIS Server is used for creating, publishing and dissemination of Donauregionen+ project maps via internet WMS services. Both products are working under Microsoft Windows hardware platform on project server, personal computers and notebooks.

4.3. D+ Web Server

The development of D+ Web Server represents the special part of WP3 package activities. It was based as a common project environment for each project partner for different and specific purposes such as:

- Completion of text parts of the General Schemes,
- Final version of Report elaboration,
- Data (text and indicators) collection,
- Primary data collection,
- Creation of WP4 form,
- Creation of WP5 form (not finished yet),
- Creation of WP6 form (not finished yet),
- Creation of WP7 form (not started yet),
- Dynamic representation of data outputs,
- Discuss forum,
- Project calendar.

5. WP4 – Analysis Completion 2010

5.1. GS objective and task for 2010

Work Package 4 (WP4), the analytical part of the project, started in June 2009 and ended in December 2010.

The objective for the year 2010 was the finalization of the 4 General Schemes, describing the area of interest – more than 50 Danube regions from 8 countries: Slovakia, Hungary, Croatia, Serbia, Romania, Bulgaria, Moldavia and Ukraine.

The task in 2010 was to elaborate the analytical description of the actual state of the Danube region from natural, socio-economic territorial points of view. The analyze was done on the bases of updated data in the case of the regions participated in the former DONUAREGIONEN project and of new data in the case of new regions, belonging to Croatia, Moldavia and Ukraine.

Within WP4 was analyzed the Danube area in each of the 4 General Schemes: Natural Conditions, Settlement Structure and Human Resources, Transport and Technical Infrastructure, Economy. The text and tables describing each General Scheme resulted from the updated or new GIS data, which made possible the completion of the description part with maps and charts.

Another activity within WP4 was the description of each NUTS 3 region on the D+WEB Server, using text and indicators allowing a better view of the area by every project partner.

Separately, a Comprehensive evaluation of the actual state of each NUTS3 region and the Typology of regions was elaborated.

5.2. GS work done in 2010

Table 3 GSs Structure

5.3. GS Natural Conditions

5.3.1. GS outputs

Activities realized in 2010 within WP4 – Analysis completion

- Creation of WP4 form on D+WEB Server
- Completion of text parts of the General Schemes
- Final version of Report elaboration

Table 3 GSs Structure

GS Natural Conditions	Text	Land use	Farmland, arable land, forest, water surface, built-up area, miscellaneous area
		Nature conservation and landscape protection	Protected areas
			Ecological Networks
		State of environment	Air quality and pollution: emissions of PM, SO2, NOx, CO
			Water: surface water quality, ground water, thermal and mineral water
			Waste: waste generation / treatment (landfills)
	Indicators	Water pollution index, atmosphere pollution SO2, NOx, ash, CO emissions per 1000 inhabitants, capacity of landfills per 1000 inhabitants	
GS Settlement Infrastructure and Human Resources	Text	Human Resources	Demographic situation, Educational structure, Labour market
		Settlement structure	Development trends, roles of importance of the towns, agglomeration areas and development axes, interregional cooperation
	Indicators	Number of dwellings per 1000 inhabitants, share of university students per 1000 inhabitants, regional vitality index	
GS Transport and Technical Infrastructure	Text	Road network, railway network, waterways and ports, air transport, multimodal transport system and terminals, electric energy networks and installations, gas and oil supply and distribution, telecommunication network, water protection and management	
	Indicators	Density of highways, density of railways, freight transferred through ports per 1000 inhabitants, ports accessibility, airports accessibility, share of dwellings connected to electricity, natural gas, broadband, drinking water supply and wastewater treatment, capacity of regional renewable energy sources	
GS Economy	Text	Economic level	GDP, activity structure, average monthly salary, life expectancy at birth
		Economic potential	Primary resources, secondary resources
	Indicators	Regional GDP per capita in PPS as share of EU 27, labour force participation rate, unemployment rate in the region, number of employed in tertiary branch, share of college and secondary school educated inhabitants, tourism – average guest nights and foreign visitors per 1000 inhabitants	

- Data collection (text and indicators) on the D+WEB Server
- GIS data collecting

Summary of GS Natural conditions

General scheme Natural Conditions is focused on the overall characterization of the area of interest from the environmental and ecological point of view. The main objective is to define the natural potential and stress factors by means of indicators concerning the natural richness and biodiversity of the area as a whole on the one hand and the state of the environment expressed by the stress factors in the field of atmosphere pollution, water pollution and waste management on the other hand.

Structure of General scheme Natural Conditions

- LAND USE – represented by the cadastral data or CORINE Landcover
- NATURE CONSERVATION AND LANDSCAPE PROTECTION – data about protected areas with national importance, NATURA 2000, etc.
- WATER MANAGEMENT – basic data of Water management

Sources and references

- National Environmental Policy (acts, regulations, etc.), National environment reports, Regional environment reports, yearbook of individual environment elements, statistical data, others

Objectives

- natural conditions and state of environment complex data evaluation in NUTS3 regions
- determining environmental indicators for natural conditions evaluation and comparison with other NUTS3 or Cross Danube regions

5.3.2. Example of analysis in the case of Nitra county, Slovakia

Land use Nitra county (SAŽP, EEA)

Land use Nitra county (SAŽP, EEA)

Graphical representation of the landscape structure of the region has been processed according to data of the CORINE Land cover (Slovak Environmental Agency Banská Bystrica, 2006) and according to cadastral data (Carthography and cadastre Authority of Slovak Republic, 2010).

Data of Land use (10th April 2010)

Nitra county	Area (ha)	Area (%)*
Farmland total	467 818,89	73,74
Arable land	406 095,19	86,81**
Forest	96 319,14	15,18
Water surface	15 731,97	2,48
Built-up area	38 016,72	5,99
Miscellaneous area	16 497,80	2,60
Total	634 384,53	100

*) - percent of the total area
**) - % of the farmland
Source: Geodesy Carthography and cadastre Authority of Slovak Republic (Cadastral Portal, 2010)

Nature Conservation and Landscape Protection

Nature conservation and landscape protection

Nature conservation and landscape protection in Slovak republic is supply by the Act No. 543/2002 on Environmental protection and landscape conservation.

Protected areas in terms of the Act No. 543/2002 on Environmental protection and landscape conservation are as follows:

- Landscape protected area (3 areas in Nitra county – Dunajské Luhy, Ponitrie, Štiavnické vrchy)
- National park (no area in Nitra county)
- Protected site (51 areas in Nitra county)
- Nature reserve (40 areas in Nitra county)
- National nature reserve (14 areas in Nitra county)
- Natural monument (19 areas in Nitra county)
- National nature monument (no area in Nitra county)
- Protected landscape feature (no area in Nitra county)

NATURA 2000

The aim of the network is to assure the long-term survival of Europe's most valuable and threatened species and habitats. It is comprised of Special Areas of Conservation (SAC) designated by Member States under the Habitats Directive, and also incorporates Special Protection Areas (SPAs), which they designate under the 1979 Birds Directive.

National list of proposed NATURA 2000 areas was confirmed by the Government of the Slovak Republic in July 2003 and updating was in 2008. There are 9 Special Protected Areas and 100 Special Areas of Conservation.

STATE OF THE ENVIRONMENT

AIR QUALITY AND POLLUTION

The main cause of air pollution in Nitra County is chemical industry, food processing industry, power generation and car transport. Food processing industry is the oldies and the broadest industrial branch in the county, which follow-up to the primary agriculture production. High air pollution produce Duslo Šaľa, SES Tlmače, CALMIT Žirany.

WATER POLLUTION

EU legislation solves the problems of protection of the sustainable water exploitation by way of Water frame directive (WFD), which has came into force in 2000. By means of this directive the way of water monitoring, assessment and management has been significantly changed in the most of European countries. Slovak republic transformed WFD into new Water Act no. 364/2004 Coll., which entered into force on 1 July 2004. Water Act relates to all forms of water bodies, water protection, rights to waters and their recording, water constructions and rights and duties to plots directly connected with waters.

The basis for surface water quality assessment is the summary of all classification results inder the STN 75 7221 STANDARD "Water quality". Classification of surface water quality evaluates water quality through 8 groups of indicators. Using the threshold values system, water is classified into 5 quality categories (I. class – very clean water, II. class – clean water, III. class – polluted water, IV. class – heavily polluted water, V. class – extremely heavily polluted water). Categories I., II. and III. are considered as favourable water quality.

Nitra county is abundant in geothermal and mineral healing springs. Geothermal springs are in Patince, Štúrovo and Nové Zámky. Mineral waters springs particularly are in Santovka and Slatina.Surface water quality in years 2007-2008

County	Watercourse	Sampling site	A	B	C	D	E	F
Nitriansky	Dunaj	Komárno	1	1	2	3	4	4
	Dunaj	Štúrovo	1	2	2	3	3	4
	Bebrava	Krušovce	2	2	3	3	5	4
	Nitra	Nitrianska Streda	3	3	3	4	5	5
	Žitava	Húl	2	3	3	3	5	4
	Malá Nitra	Pod Šuranmi	3	3	4	4	5	4
	Nitra	Komoča	3	3	3	3	5	3
	Hron	Kamenica	2	2	2	3	4	4
	Váh	Komárno	1	2	2	3	3	4
	Malý Dunaj	Kolárovo	1	2	2	3	3	4

Source: Slovak Hydrometeorological Institute, 2009

WASTE

A balance of waste production according the economic activities enables to identify those sectors, which produce the highest volume of the waste or the significant volume of particular type of waste: industry 41%, agriculture 19,6%, wholesale, retail, repair of motor vehicles and motorcycles and personal and household goods 11,4%, this sector produces also the highest share of hazardous waste (36,5%).

In 2005, 218 168,64 tons of municipal waste were produced, what is 307,9 kg per inhabitant per year. Counties with the highest municipal waste production per inhabitant are Šaľa 360, 87 kg and Nitra 320,62 kg.

The share of waste stored in landfills is in the long term stable. In 2005, 48% of total waste produced was stored in landfills of all classes. The highest share of storing in landfills indicates municipal waste, 94% of total municipal waste production was stored in landfills.

There is no municipal waste incineration plant in the region and only industrial waste incineration plant is located in the region (DUSLO incineration Šaľa).

Nature Conservation and Landscape Protection for whole D+ area

5.4. GS Settlement Structure & Human Resources

5.4.1. GS outputs

General Scheme „Settlement structure & Human resources" aims to specify the present status and trends of human resource development and settlement structures and their potential in the international cooperation. Features and status of the demographic development and settlement structure are a reflection of pursued policy on economic development, the potential of the territory and development of infrastructure network and systems.

The project includes settlement structures of different ranks and importance from metropolitan regions of Bratislava, Budapest, Belgrade, and Bucharest to the poorest regions in the European Union. General Scheme Settlement Structure and Human Resources has been developed in accordance with:

- the proposed methodology for Work Package 4 of the ERDF Partner Project 1 – Institute on Spatial Planning, Bratislava and ERDF Partner Project 8 - National Association of municipalities in the Republic of Bulgaria, as a partner responsible for overall preparation of the scheme based on the contributions of all other partners;
- national inputs of all participating parties – partners of the project;
- General principles and policy strategies for development of the cities and European community, including Leipzig Charter on Sustainable development of European Cities (24 May 2007), Territorial Agenda of the European Union: Towards a More Competitive and Sustainable Europe of Diverse Regions, agreed at the Informal Ministerial Meeting on Urban and Territorial Cohesion in Leipzig on May 24th and 25th, 2007; Declaration of Toledo – Informal Meeting of Ministers for Urban Development, June 22, 2010 and etc.

The General Scheme includes two main parts. First part analyzes the Human resources, as representing the trends and internal regional disparities in:

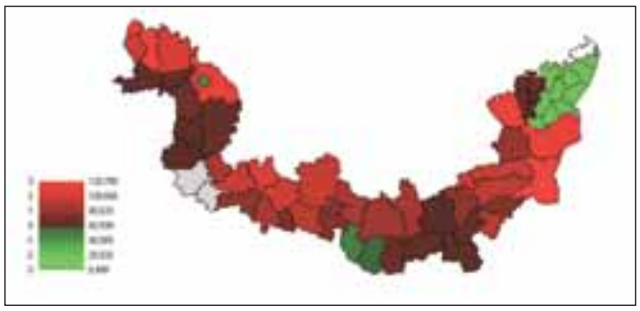
- demographic situation of the regions;
- age structure; Dependency ratio and Vitality Index;
- trends according to city size and urban-rural pattern;
- the process of depopulation and population concentration; educational structure and labour market.

Second part represents the analysis of the Settlement structure, as focusing on:

- location and geographical distribution of cities;
- ranks of cities according to size of population; the process of urbanization;
- current position and function of the settlement centres from the point of view of the territorial-administrative division and functional activities (industry, services, leisure and tourism, cities-gateways, etc.);
- roles of importance of the cities and towns on European, national and regional scale,
- main elements of regional urban system - agglomeration areas; development axes and corridors of European, national, regional, subregional/local importance;
- turistic areas.

(see Vitality Index in Danube region of the project, 2008)

Vitality Index in Danube region of the project, 2008



Analyses and evaluations are presented in the territorial scope of the whole Danube region of the project, for different country's regions and for the different NUTS 3 regions.

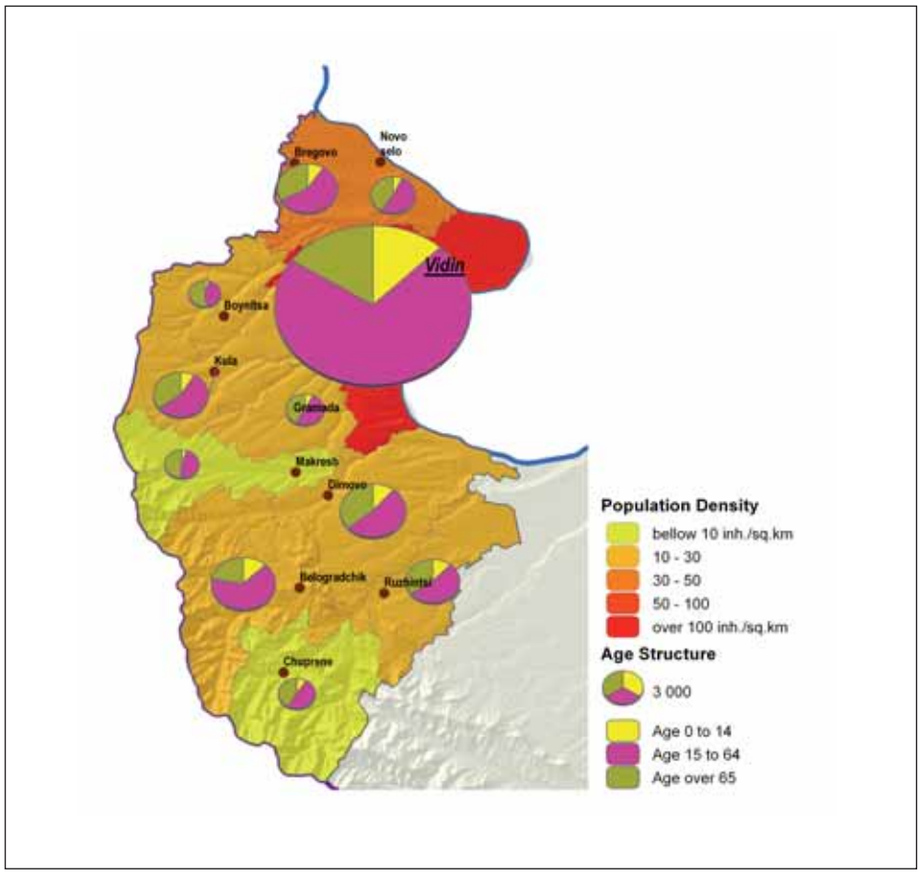
Information is presented in the text format, tables and charts, as well compatible GIS technology formats.

5.4.2. Example of analysis in the case of Vidin District,Bulgaria

Demographic Status.

Population of Vidin District consists of 110 310 people (2008 r.), which constitutes of 7,1% of the total population of Bulgarian part of the Danube region of the project. The district covers 142 settlements of them 7 cities and 135 villages. In the frame of demographic development of the region, internal differences on municipal level (NUTS 4) are observed on every demographic indexes. The population varies in a very wide range – from 1797 people for Boynitsa (1,6 %) to 77,167 people – for Vidin (61,1%). The population density is 36,4 people per sq. km – the lowest in the Danube region of Bulgaria. Processes of depopulation and accumulation of municipalities with adverse demographic structures occur mainly in the border territories of the region. Concentration of population and relatively favorable demographic situation is observed in the regional center of Vidin.

Population Density and Age Structure in Vidin District (NUTS 3 region)



In Vidin district there is no increase of the population at any time between the censuses after the year 1946. This trend of reducing is typical also for the number of population in the individual municipalities. According to its population number the municipalities in the area, except Vidin, occupy the last places among the municipalities in the country. The average number of persons currently living in a municipality amounted to 10028 with an average 20733 for the Bulgarian Danube region and 28813 for the country.

The age structure in the area is unfavorable. For the period of 1991-2008 number of young people (aged from 0-14 years' old) is reduced form from 17,1% to 12,0% (compared to the total amount of population in the area) The working age population (aged between

15-64) also decreased in absolute number, but relatively increased from 60,9% in the 1991 to 64,2% in the 2008. The decline of the working age population is accompanied by an increase of cases of those aged over 65 years from 22,0% (for 1991) to 23,8% (for the year 2008). As a result of these changes in 2008 Vidin district has the lowest density of population of the Danube region and with the most favorable aged structure is only Vidin municipality.

(see Population Density and Age Structure in Vidin District (NUTS 3 region))

Following the trend of change in population age structure in the direction of aging, the ratio of age dependency is increased. In 2008 the population aged over 65 years in the region is 37,2% compared to that of working age (the highest rate in the Bulgarian Danube region), indicating that maintenance costs of older people for health and social services here are at the highest extent. The total dependency ratio (the ratio of population under 15 and over 64) in average for the Danube region of the country is 47.2%, in Vidin region it is 55.6%, in which forming a higher proportion is elderly people.

The population of Vidin has a negative natural growth, supplemented with a negative migration growth. In 2008 the value of the coefficient of natural growth in the region of Vidin is – 14,5‰, the average for region of the Danube coast – 8,3‰ and for Bulgaria - 4,3‰. For the period after 2000 there are no significant changes in the demographic development of Vidin.

Education Structure

Against the overall reduction of the population of the region for the period 2005-2008, there was minimal increase in those with higher education from 16,3% to 16,7% in the age group 24-64 years old. There is a parallel increase of the share of persons with secondary education from 56,0% to 59,9% compared to the population of 19 to 64 years old. Slow decrease is shown upon low educated persons (primary and lower secondary level) from 32.4% to 29.0%. For the period, there are no significant changes in the relationship between the education levels of the active population levels in the district – retain the highest proportion of people with secondary and higher education and the share of low educated population is decreased.

Labor Market

Economically active population is 56.5 thousand persons (2008) – 7.2% of the population of the Danube Region of the country. The economic activity rate is 79.8%. The employment rate (54.7 %) is among the lowest in the Danube region of the country, which reflects over the level of unemployment (11.57% - 2009). In all municipalities in the district with the exception of Vidin, the unemployment rate is above the average for the region and nearly 50% above the average for the Danube region of the country, ranging between 7.6% (for Vidin Municipality) and 30.7% (for Dimovo Municipality). The trend for the lowest values of the regional center and the highest level for the municipalities in rural and mountainous parts of the area are retained.

Trends for development

For the period of 1992-2008, the population of Vidin district is characterized by the highest negative rate of population growth among other districts in the Danube region of the country (-27.3%). The basis of the reduction of population is negative natural reproduction, combined with negative migration growth. There are significant internal district municipal differences. With the exception of Vidin, where growth (-21.6%o) is lower that the average for the area, but above the average for the Danube region of the country (-18.5%), in other municipalities values are – 27.7% for Belogradchik and up to -46.0% for Boynitsa. Actually decrease of the population of the area began in the middle of the last century and continues today with declining intensity.

Features of the Settlement network

Vidin district has 142 settlements, of them 7 cities and 135 villages grouped in 11 municipalities. In the area dominates urban population, mainly in municipal centers and represents 61 % of the total population.

In Vidin district 7 cities are situated or 10% of all cities in the Danube region of the country. Four of them (Bregovo, Gramada, Dimovo and Dunavtsi) declared towns during the period 1969-1974. At the end of the 2008 the cities of Vidin district have 67 336 people, or 6.9% of the urban population of the Danube region of the country. The population of the cities decreases as compared with 2001, the reduction of the urban population of the area is by 7.8 thousand or 20%.

Settlements with fewer than 500 residents are 77.5%, as during the last 15 years their number is increased. Another group is the settlements with a population between 500 and 2000 people, covering 18.3% of the villages in the area. Total settlements with fewer than 200 people are 95% of all 142 settlements and nearly 40% of the population of the area. With a population of 2000 to 10000 people are only 5 cities, with population of 20 000 to 100 000 is Vidin. There is a trend towards reducing the number of settlements in the higher groups of the population and increase the group's of the settlements with fewer than 500 people. Villages are predominantly from the category of small and very small villages with fewer than 200 people. Population of the villages in the area is decreased; there are also depopulated villages with less than 30 people. Small and very small villages are dominated with population under the 1000 people (over 90% of all villages) in which live 78% of the rural population. Medium and large villages comprise less than 5% of villages with 22% of the rural population.

The density of the settlements of 100 square miles is 4.7

– close to average (4.8) and above average for the region of the Danube coast of the country (4.2). In municipalities there are differences ranging from 2.7 to 6.6 for Chuprene of Vidin. Most municipalities have a population density of the settlements around 5.

Vidin district is characterized by low degree of urbanization (61% share of urban population) and the main reason is that 6 out of 7 cities are in the category of very small towns (with less than 10 000 people). In the district town of Vidin, three quarters of the total urban population of the area is concentrated. The degree of urbanization of the municipalities, as measured by the proportion of their urban population is between 78.7% for the municipality of Vidin and 17.3% for Dimovo.

The urban areas include 14 227.9 ha of the total territory of the district or 4.7%. The highest proportion is in Vidin Municipality – 8.4%, and the lowest in the municipalities in mountain areas (Chuprene – 2%, Belogradchik – 2.5%).

Settlements are not uniformly distributed in the region. The reason is diverse terrain, which is presented by the Danube hilly plane, fore and main Stara Planina (Balkan) chain. Distances between settlements are not large. Depending on the relief, settlements are plains and mountainous, dominated by mountainous. Mountain villages have access to the Republican road network, but some small settlements are inaccessible due to the poor road conditions.

Vidin is a municipal and regional administrative center. Mainly due to economic problems and difficult period of transition Vidin did not form a strong field of spatial influence, exceeding the municipal and district boundaries. There is no other center in the area with the dominant influence as the town of Vidin.

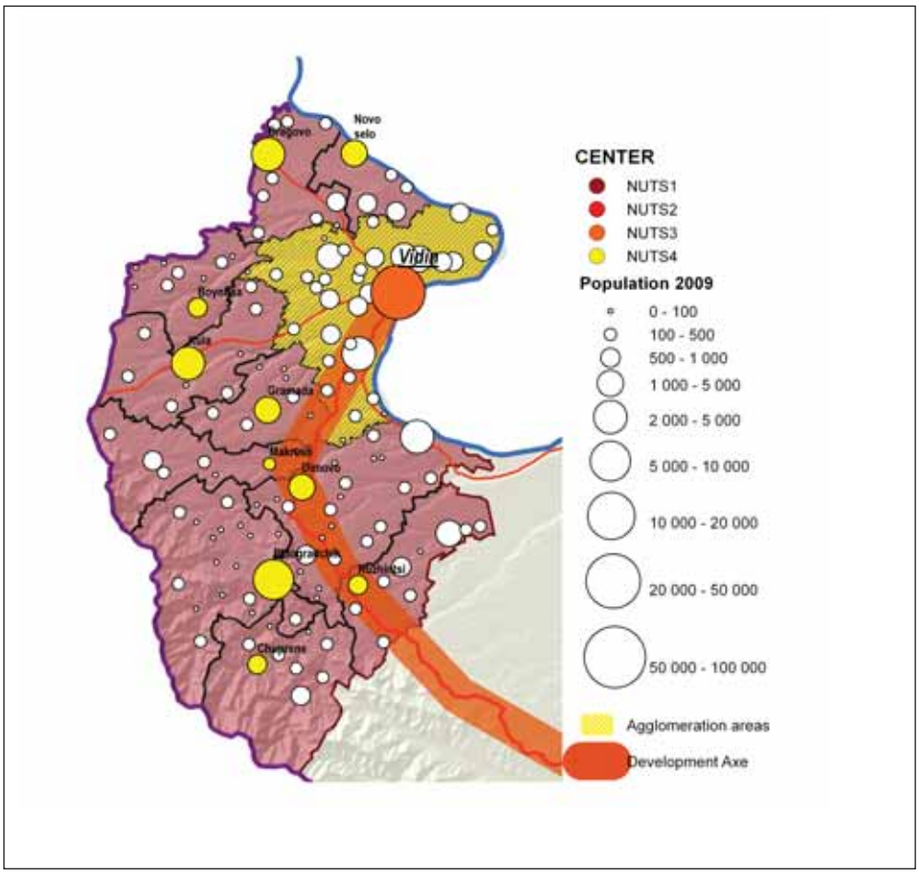
Significant for the area is the town of Belogradchik, landing center in the area with great potential for tourism development. The other cities are mostly rural and have local significance for organizing of the rural hinterland around them.

The formation of the axis Vidin – Sofia – Blagoevgrad – Kula along the European transport corridor #4 is the main axis of development and urbanization North – South of the country. Vidin is an element of the Danube corridor development. Vidin will increase its influence, as a city gate with the construction of the second Danube river bridge between Bulgaria and Romania.

Vidin has a leading role in cross-border cooperation with neighboring regions of Romania and Serbia.

(see The settlement structure and regional development axe in Vidin District (NUTS 3 region))

The settlement structure and regional development axe in Vidin District (NUTS 3 region)



In the future development of the area, of particular importance will be to stabilize and revitalize its urban structure. All cities, including Vidin, need to strengthen their socio-economic potential. Small cities – centers of the municipalities have their chances to make themselves of basic centers of urban network, serving the rural settlements, thereby improving the link "city-village" in line with the European policies for social and territorial cohesion.

Standards of living

For the period of 2005-2008 housing has been increased per 1000 habitants from 542 in 205 to 640 in 2008, due to two main reasons: increase of the number of dwellings and a reduction of population in the region. There are differences in the municipalities, resulting in a greater number of dwellings per inhabitant in small municipa-

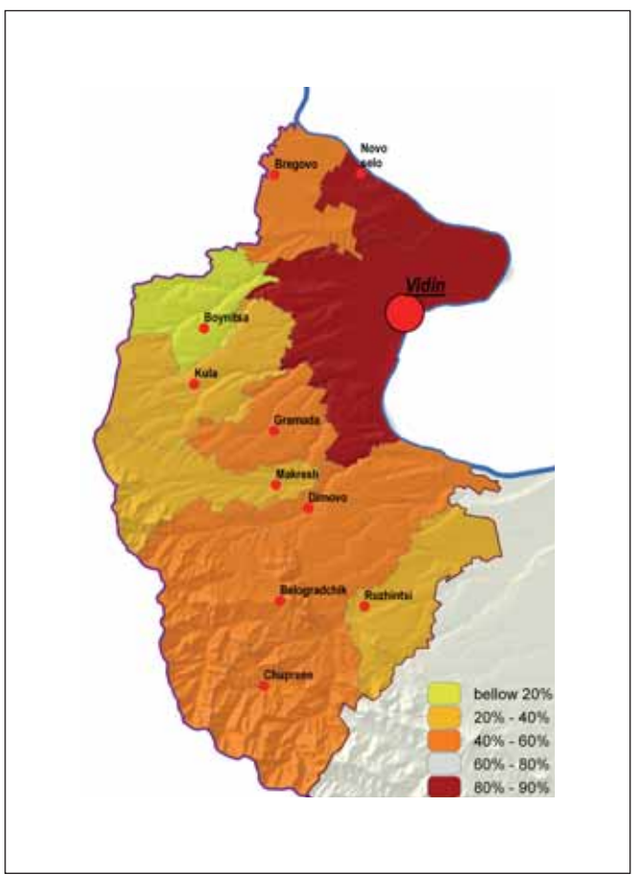
lities and respectively lower in the municipality in Vidin and the town of Vidin. Excluding Bregovo, in all other municipalities the indicator values are above the average for the area.

The average number of persons per dwelling for the area is 1.56, which is below the average for the region (1.89) and country (1.94). For the period of 2005-2008 there is a reduction in the number of persons per dwelling mainly due to decrease of population.

Public utilities in the area are poor – 70.3% of dwelling built are connected by public water and 65% - by public sewerage.

There are significant differences in the municipalities. With the best indicators of public utilities are the municipalities of Vidin and Novo Selo – over 80% of dwellings are connected to public water and sewage systems. With the lower indicators of residential public utilities are Boynitsa, Ruzhintsi and Kula.

Sewage system development in Vidin District, 2009



5.5. GS Transport & Technical Infrastructure

5.5.1. GS outputs

General Scheme Transport and Technical Infrastructure aims at analysing all relevant networks and systems in each of the DONAUREGIONEN+ regions. The first results reveal a great variety of situations: from different national classifications to important regional imbalances in terms of accessibility and quality of the existent networks and installations. On the other hand, some common rules can also be applied to the entire Region, such as the clear centre-periphery pattern where regions of the capital cities and their closest neighbourhood benefit from good connections and facilities whereas remote and demographically declining areas are generally in an inferior position. The main idea of the DONAUREGIONEN Project and so of the present General Scheme is to create foundations for a more balanced and, above all, more integrated spatial development in the whole Project area.

General Scheme: Transport and Technical Infrastructure has been prepared according to:

- Project methodology for the Work Package 4 – Transport and Technical Infrastructure, proposed by ERDF Project Partner 1 – Institute of Spatial Planning, Bratislava and 10% project Partner 5 - the Republic Agency for Spatial Planning of the Republic of Serbia, responsible for the development of the General Scheme: Transport and Technical Infrastructure;
- National contributions of all participating countries provided by responsible partners;
- Territorial Agenda of the European Union: Towards a More Competitive and Sustainable Europe of Diverse Regions, agreed at the Informal Ministerial Meeting on Urban and Territorial Cohesion in Leipzig on May 24th and 25th, 2007;
- Various EU agreements, strategies and projects in the field of transport and technical infrastructure.

Data were collected in the form of text, tables and graphs as well as in formats supported by the GIS technology.

General Scheme is divided into two major parts, one dealing with transport and the other one with technical infrastructure. Each of the main topics includes different subtopics, describing individual subsystems by country. All topics and subtopics are provided with basic information on the issue. The maps are produced on the basis of the collected GIS data. Subtopics are:

Transport

- Road Network
- Railway Network
- Waterways and Ports
- Air Transport

- Multimodal Transportation System and Terminals

Technical Infrastructure

- Electric Energy Network and Installations
- Gas and Oil Supply and Distribution
- Telecommunication Network
- Water Protection and Management.

5.5.2. Example of analysis in the case of Južnobački County, Serbia

Transport

Road network

There is one motorway passing through Južnobački County - E 75 (Pan-European Corridor X branch B), section Subotica – Novi Sad being still under construction (extension to motorway width). The motorway passes through four out of 12 municipalities/cities (NUTS 4/LAU 1) belonging to Južnobački County (Vrbas, Novi Sad-grad, Srbobran and Temerin), the density of motorway network being the highest in the City of Novi Sad (0.060 km/ km2). The total length of motorway in the County is 64.52 km, its density being 0.016 km/ km2.

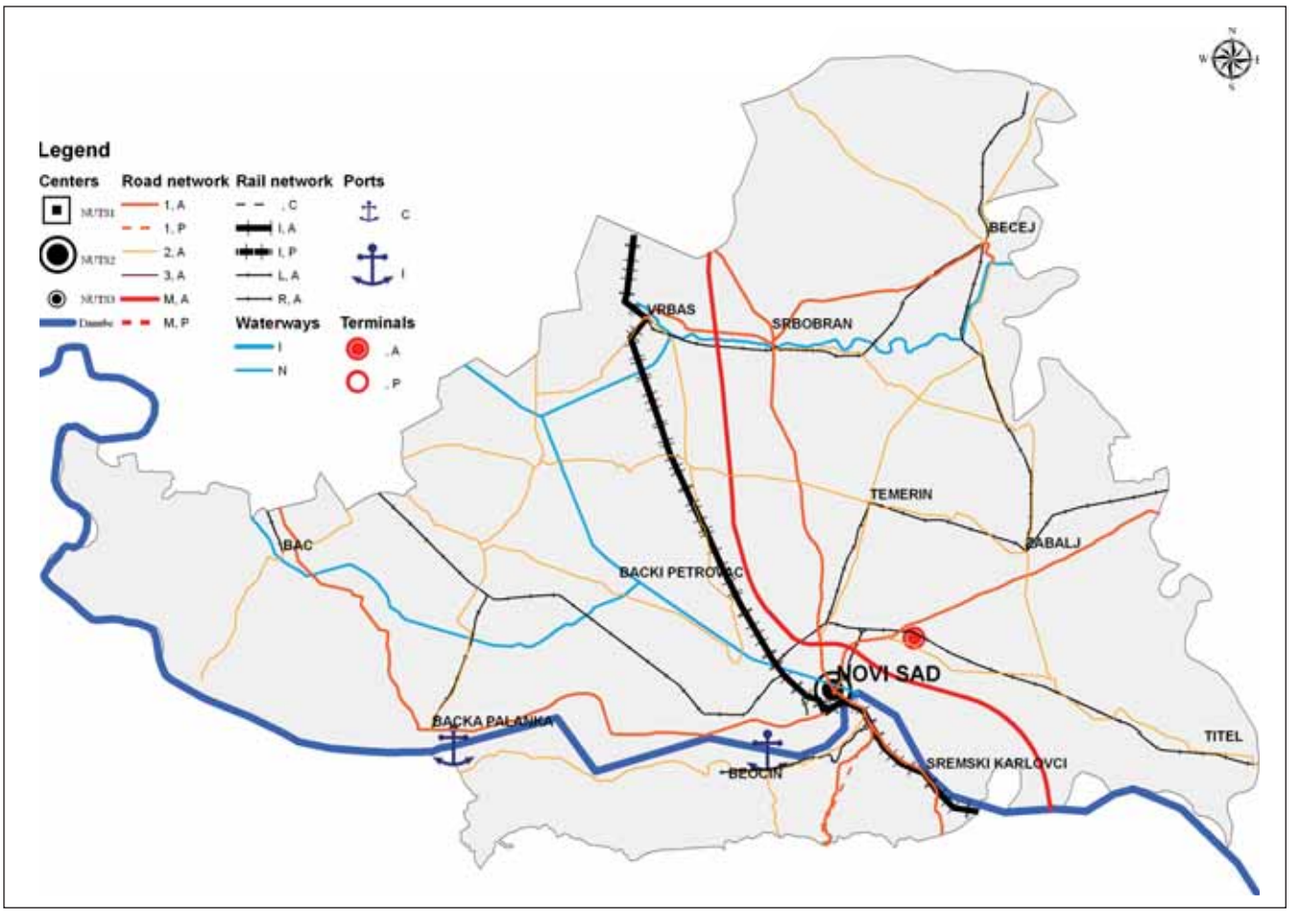
As far as 1st class roads are concerened, following ones pass through Južnobački County:

- M3: (border crossing point Bogojevo – Odžaci – Kula) – Vrbas – Srbobran – Bečej – (Novi Bečej – Novo Miloševo),
- M7: border crossing point Bačka Palanka – Novi Sad – (Zrenjanin – Žitiste – Nova Crnja - Srpska Crnja),
- M18: (border crossing point Bački Breg – Bezdan – Sombor – Odžaci – Srpski Miletić) - Bač – border crossing point Backa Palanka
- M21: Novi Sad – (Irig – Ruma – Šabac – Valjevo – Kosjerić – Požega – Užice – Nova Varoš – Prijepolje – border crossing point Gostun),
- M22: (Horgoš) - Novi Sad – Belgrade – Lazarevac – Ljig – Gornji Milanovac – Kraljevo – Raška – Novi Pazar – Ribariće),
- M22.1: (Horgoš – Subotica – Bačka Topola – Mali Idoš) – Srbobran - Novi Sad - Sremski Karlovci – (Indija - Stara Pazova – Zemun).

The total length of 1st class roads is 305 km (100% asphalted), their density being 0.076 km/km2. The highest density is in the City of Novi Sad (0.186 km/ km2) and the lowest in the Municipality of Bačka Palanka (0.019 km/ km2). First class roads do not pass through the municipalities of Beočin, Sremski Karlovci and Titel.

The total length of 2nd class roads in Južnobački County is 521 km, 98.46% being covered by modern carriage. Density of this network at the level NUTS 4 / LAU 1 varies from 0.063 km/km2 (Municipality of Bač) to 0.306 km/ km2 (Municipality of Beočin), the average being 0.130

Transport network and installations in Južnobački County



km/km2.

According to the new Spatial Plan of the Republic of Serbia 2020, strategic priorities and projects (until 2014) include:

- Completion of the second half of motorway within Corridor Xb in the length of 107 km (section Horgoš - Novi Sad);
- Rehabilitation of bridges over the Danube in Novi Sad;
- Reconstruction and construction works on 1st class roads M7 and M18 (including construction of a link Bačka Palanka – Šid).

After 2014, construction of bypasses is plannied around Novi Sad and Sremski Karlovci.

Railway Network

There is one railroad of international importance passing through Južnobački County - E 85 (Pan-European Corridor X branch B), section (border crossing point Kelebija – Subotica) – Novi Sad – (Belgarde – Niš – Preševo – border crossing point Tabanovci / Kraljevo - border crossing point Djeneral Jankovic). Its total length in the County is 66 km, the density of 0.02 km/km2 being below the average value for Danube counties in Serbia (0.03 km/ km2). Through the territory of Južnobači County railroads of regional importance pass in the total length of 98,00 km.

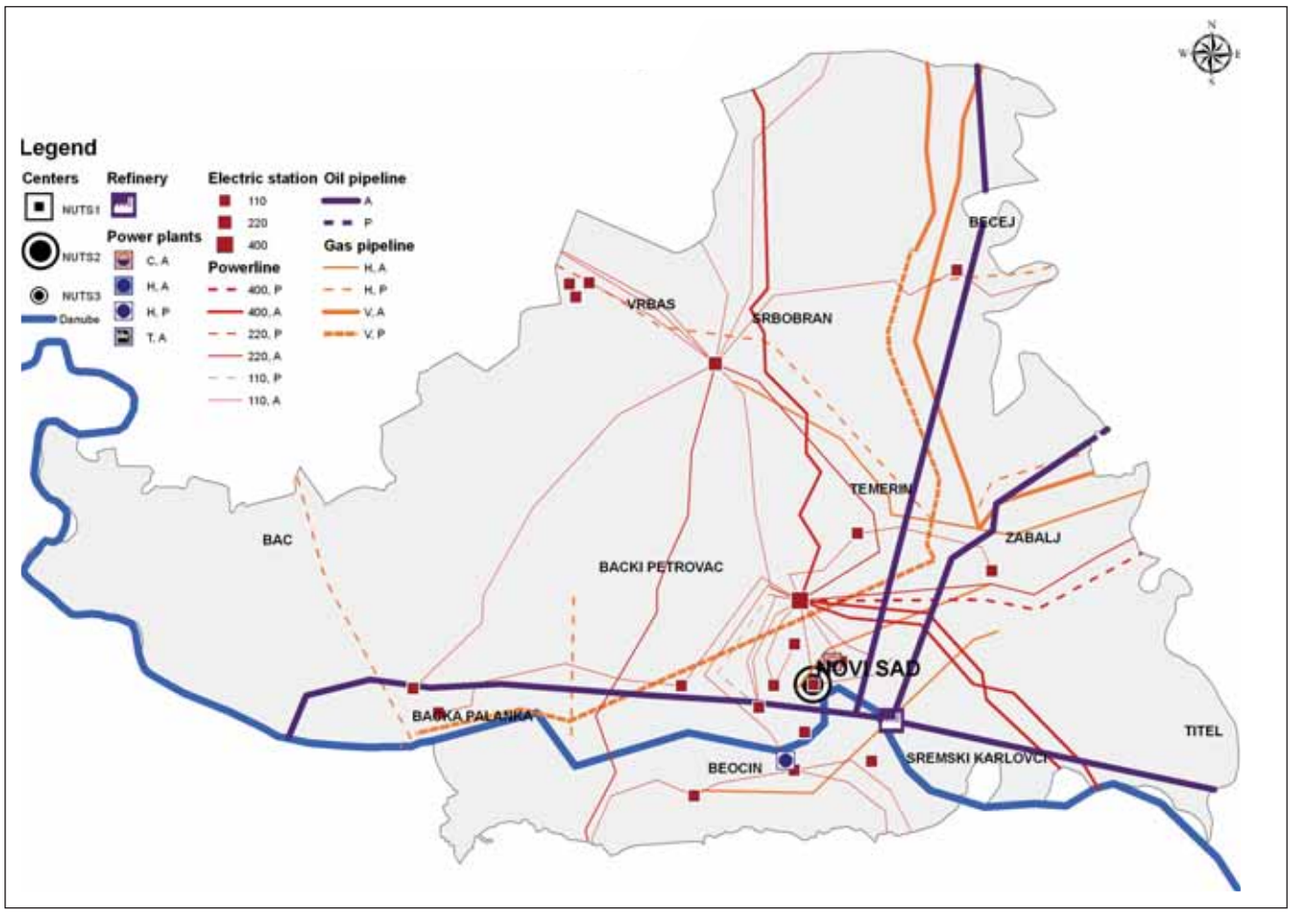
The railroads of regional importance passing through Južnobački County are railroad no. 21: Novi Sad – (Odžaci – Bogojevo) and railroad no. 31: Novi Sad – Sajlovo - Rimski Šančevi – Titel – (Orlovat). The total lenght of the railroads of local importance is 155 km.

In 2008, total number of transported passengers was 730,773 whereas the total volume of transported freight was 592,961 t.

According to the Draft Spatial Plan of Serbia 2010-2014-2020, priority works within Corridor X include reconstruction, development and modernization of existing railroads, the construction of second track and achieving high performances for mixed (passenger and freight) transport, combined transport and speeds of 160 km/h (220 km/h where possible). According to this planning document, 63.09 km of international single-track railroad will be widened to double track one in Južnobački County. Regional railroads connect regions with international railroad network and have great importance for regional development. It is planned to rehabilitate and modernize both regional single-track railroads (railroad no. 21 and railroad no. 31). Railway network should also be complemented with priority being given to the future railroad Belgrade – Obrenovac - Novi Sad.

(see Transport network and installations in Južnobački County)

Technical Infrastructure in Južnobački County



Waterways and Ports

Waterway network of Južnobački County includes:

- International waterway E 80 - Danube in total length of 170 km,
- Danube – Tisa - Danube Canal (DTD), as a unique multipurpose system (flood control, irrigation, water supply, waste water evacuation, navigation and tourism), in total length of 153 km, and
- International waterway E 80-01 - river Tisa in total length of 74 km.

The Port of Bačka Palanka is national port situated on km 1,295 km on the left bank of the Danube and covering the area of 1,100,000 m². The Port has a direct access to railway and road network. The maximum depth in the Port is 3 m whereas permissible draft is 2.5 m.

Port of Novi Sad is 99,4 % owned by the Republic of Serbia, the rest belonging to private persons. The port is located at kilometer 1254,00 on the left bank of river Danube. More than 80 % of all goods are bulk cargo. Most common goods are fertilizers, coal, coke, sugar pellets and agricultural products such as maize, grain and sunflower seeds. The total surface of covered area is 350,000 m². By way of 6,800 m long rail sliding the Port is connected to the national and international railway system, the city of Novi Sad being an international railway node.

Air Transport

Airport of Novi Sad, known locally as Airport Čenaj as it is located near the village of Čenej, is situated 16 km north of Novi Sad, on the eastern side of the road M22/M22.1. The airport is mainly used for sport and agriculture purposes.

Multimodal Transportation System and Terminals

Two multimodal corridors cross Južnobački County - corridor X and inland waterway corridor VII (the Danube). Terminal infrastructure is only partially developed (in the Port of Novi Sad). Development of intermodal transport is directly connected to reconstruction and construction works within the road and rail Corridor X. A connection should be made between roads, railroads and the Danube (corridors X and VII) in Novi Sad.

Technical Infrastructure

Electric Energy Network and Installations

The total length of transmission lines in Južnobački County is 545 km. High voltage electric transmission lines (400 kV) provide the transmission of electrical energy from power generation sources to concentrated areas of customers. In Južnobački County, two 400 kV substations, two 220 kV substations and 15 110 kV substations transform high voltage electricity into lower voltage electrical energy. The network of 110 kV transmission lines is 313 km long whereas the network of 220 kV transmission lines is 130 km long and of 400 kV transmission lines, 102 km. It is planned to construct another 12 km of 110 kV transmission lines in this county.

Combined Heat and Power Plant "Novi Sad" is a branch of the Economic Association „Combined Heat and Power Plants Panonske" plc. It is located on the territory of the municipality of Novi Sad and has 2 blocks. The total available capacity of this plant is 208 MW, the energy generated in 2007 being 423 GWh. The plant generates electrical energy, technological steam and heating. Natural gas is provided thanks to the connection made with the main gas pipeline, a fuel oil pipeline brings fuel oil whereas the Danube provides cooling water.

According to the new Spatial Plan of the Republic of Serbia 2010-2020, strategic priority until 2014 is to build a new block in the Combined Heat and Power Plant "Novi Sad", namely from 2011 to 2013.

Gas and Oil Supply and Distribution

Until October 2005, gas and oil supply and distribution were competence of one company. Today, 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.

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. On the territory of Južnobački County there is a gas field near Srbobran.

Serbian gas pipeline system, based on the main pipeline Horgoš – Senta – Gospodinci – Batajnica -Velika Plana – Paraćin – Pojate - Niš and the systems of income and distribution pipelines and urban distribution networks of medium and low pressure, passes through Južnobački County in north-south direction. The total length of very high pressure gas pipelines in the County is 96 km and the total length of high pressure gas pipelines is 94 km.

In Serbia and the Danube area there exist only crude oil pipelines and they pass trough Južnobački County in total length of 171 km. NIS refining complex consists of two refineries, located in Pančevo (Juznobanatski county) and Novi Sad (Juznobacki county) and which produce a whole range of petroleum products – from motor gasolines and diesel fuel to mechanical lube oils and feedstock for petrochemical industry. The maximum capacity of the product lines in the refinery of Novi Sad is up to 2.5 million tons of crude oil per year.

(see Technical Infrastructure in Južnobački County)

Refineries in Pančevo and Novi Sad intend to increase the quality of finished products in line with the standard Euro

5. The infrastructure of the oil pipeline consists of terminal which is located at the Novi Sad Oil Refinery, and has 2 storage tanks and 2 handling tanks of 10,000 m², pumping station and measuring station which is located near by the Pancevo Oil Refinery.

Telecommunication Network

The development project of the "Electric power industry of Serbia" (EPS) for telecommunication network is primarily based on the application of optical cables along power lines. By the end of 2007, some 3.100 km of regional optical network were realized along transmission lines of the Serbian power system. During 2008, equipping of about 580 km of 110 kV voltage level transmission lines was anticipated.

EPS telecommunication networks are connected with the networks of neighbouring countries through Optical Ground Wire (OPGW) Cable, placed above transmission lines between interconnection facilities, with the transmission systems of synchronous digital hierarchy. In 2003, EPS installed (from its own funds) an Optical Ground Wire cable along the interconnection lines towards Hungary (Belgrade – Obrenovac – Novi Sad – Subotica) and Croatia (Belgrade – Obrenovac – Sremska Mitrovica) with a total length of around 500 km. The total length of fibre optic cables in the Danube area is 330 km. These cables pass through Južnobački County in total length of 66 km.

Fixed telephone traffic and installations are being provided and maintained by the Joint Stock Telecommunication Company "Telekom Srbija", owned by two shareholders: PE PTT Traffic "Srbija" and OTE Greece. In February 2010 the Republic Telecommunication Agency announced that Telenor Limited Liability Co, got a Licence issuance fee for the second Fixed Operator in the Republic of Serbia. The international telecommunication network of Telekom Srbija is directly connected to telecommunication networks of 45 world telecommunication operators in 30 countries of the world. In charge of national fixed telephone services is the Service Division, organised in four regional units (North, Belgrade, Centre and South), Novi Sad being among cities covered by the unit North. In 2006, the level of digitalisation within the unit North was 90.9%.

There are 3 operators holding a license for the provision of public mobile telecommunication network services:

- "Telekom Srbija" a.d., as of August 1st, 2006
- Telenor ASA, as of September 1st, 2006
- Mobilkom Austria AG, as of December 1st, 2006.

In the Danube region, there exists one telecommunication node in each county. Total number of ordinary telephone subscribers in Južnobački County in 2005 was 233,487 and of mobile subscribers 229,043.

In 2008, there were 201 Internet providers in Serbia, whereas in December 2008 there were exactly 197 ISPs registered in the Authorization Register. The data on internet providers by county do not exist. In 2008, number of ADSL subscriptions doubled comparing to the year 2007. Increase in the number of Internet users through cable modem was also significant and reached 70%. The best selling broadband Internet packages in 2008 were those with downlink speeds of 512 kbps and 1024 kbps. On the other hand, number of dial-up users is rapidly decreasing in the past several years.

The leading operator in radio and TV programme distribution in terms of the number of subscribers is the company Serbia Broadband (SBB), with the market share of 54%. Beside SBB, in the radio and television distribution market there are companies such as Public Enterprise PTT, Kopernikus tehnology doo, IKOM DOO, Radijus vector doo and KDS DOO Novi Sad. There are 8 cable providers in Južnobački County in 2008.

Water Protection and Management

Competences for water management are entrusted to the Ministry of agriculture, forestry and water management (Republic Office for Waters), Public Water Management Company "Srbijavode" and local self-governments (municipalities and cities). However, other Ministries are also responsible for certain aspects of water resources management such as Ministry of Environmental Protection, Ministry of Health, Ministry of Public Administration and Local Self Government and Ministry of Infrastructure). On the teritory of the Autonomous Province of Vojvodina, to which Južnobački Countz belongs, is entrusted to the Public Water Management Company "Vojvodinavode".

The share of flood risk areas in the total surface of Južnobački County is 25.95%. The Danube-Tisa-Danube system of canals was constructed for the purpose of both flood prevention and irrigation. However, the efficiency of existing structures needs to be improved. The priority is being given to the reconstruction of protection structures in the area of the citiy of Novi Sad.

Existing water barrages in the County are situated at:

- Zmajevo (on the River Jegricka),
- Jegricka moore,
- Novi Becej (on the River Tisa).

A dam is proposed to be built at Srbobran (on the River Krivaja).

The share of inhabitants connected to public drinking water network is 90.81% but only 54.47% of them have direct access to the public sewage network. The capacity of underground water sources in Južnobački County is 1634 l/s. Once established, the regional water supply system of Novi Sad will be able to provide water supply to all municipalities of Južnobački County.

GS Economy

5.5.3. GS outputs

General Scheme Economy focused on the overall characterization of the areas from the economic point of view. The main objective is the evaluation of the development potential of the area at NUTS3 level on the bases of statistical data revealing the existent conditions in the area.

The structure of General scheme Economy consist of two big topics:

- Evaluation of the economic level of the region and
- Evaluation of the development economic potential of the region

The detailed content of these two issues are the follwoing:

1. Evaluation of the economic level of the region
   a. GDP for the region in EUR,
   b. GDP for the region in the national currency,
   c. GDP for the region expressed in buying power,
   d. GDP per inhabitant expressed in buying power.
   e. Average monthly salary
   f. Life expentancy at birth – man (years)
   g. Life expentancy at birth – women (years)
2. Evaluation of the development economic potential of the region
   A. Primary resources (natural potential)
      a. petrol,(t)
      b. natural gas, (m3)
      c. ore raw materials, (t)
      d. non-ore raw materials, (t)
      e. forest resources, (thousand ha)
      f. agriculture land (thousand ha)
   B. Secondary resources (potential created by human activity)
      B.1 Working potential of the region and regional labour market
         a. number of inhabitants of the region in working age (number and %)
         b. number of economically active population in the region (number and %)
         c. unemployment rate in the region.(%)
      B.2 Sectoral structure of the regional economy
         a. the sectoral structure of the regional economy on the NUTS 2 level
         b. the structure of the regional economy will be assessed more precisely at the NUTS 3 level
      B.3 Educational structure of the inhabitants in the region
         a. share of inhabitants with primary education, (%)
         b. share of inhabitants with secondary education, (%)
         c. share of inhabitants with higher education,(%)
      B.4 Research and Development
         a. total R&D personel by all sector of performance (percentage of total employments)
         b. human resources in science and technology (% of total population)
         c. structure of enterprises
      B.5 Innovation
         a. higher education institutions (pieces)
         b. industrial parks (pieces)
3. Tourism (if possible, but at the moment we lack plenty of data)

Sources and references

- European documents and databases,
- National programs, plans, documents and statistical yearbooks
- Business Registers Agencies, bulletins, financial reports, working papers.

Objectives

Based on these indicators it was drawn a picture on the analyzed area from the economic point of view, resulting the similarities and the differences in the developed and problematic areas of the Danube region.

5.5.3. Example of analysis in the case of Komárom-Esztergom county ,Hungary

Hungary joined the EU on 1st May 2004, so the economic development was stronger due to the joining process. Being part of the Schengen system Hungary and Slovakia is currently inside the European market. Komárom-Esztergom county is shown, as it is between Hungary and Slovakia and the development documents were first evaluated for this county.

General Information

Regional Gross Domestic Product in purchasing power parity during the monitoring period showed a positive significant increase by 56,5% (2008/2001). Economic active population is important potential and value-creating factor of economic development of the area. During the period between 2001 and 2008 the rate of economic active population was recorded slightly increase. In 2008 it was reported 59 active population which was increase by 5% in comparison with the year 2001. Positive factor for further economic development of the region is increasing number of employed which have positive effect to significant decreasing of unemployment rate in the region. In 2008, most employees worked in the tertiary sector (44,49%), especially in commerce and market oriented services. During the monitoring period it was recorded the significant increase of employment in the sector public administration and defense, building industry and financial businesses. Increase of employment in public administration and defense was caused by the establishing of the self-governing regions as well as devolution of certain

competencies from state administration to self-governing municipalities. In the building industry, the year 2008 it was recorded slight decrease due to the start of contraction crisis beginning within the region as well as on national level.

Evaluation of the economic level of the region

Gross Domestic Product (GDP)

Regional GDP in purchasing power parity is calculated as the sum of added values (produced in region), taxes on products reduced by subsidies on products and eliminated by different levels of prices within other region. This indicator was not available for the year 2008 on NUTS 3 level, therefore it was used for comparison the figures for the year 2007. During the period it was recorded positive trend. Regional GDP in purchasing power parity per capita was increase from 10800 to 16900 (increase by 56,5%). The indicator reached 67,9% of GDP EU-27 (in PPS).

Activity Structure

The best expression of the activity structure is the indicator Gross added value by branches based on statistical and administrative data sources. We analyze this indicator during the period from 2001 to 2007 within particular region. According to NACE classification: manufacturing, electricity, gas and water supply, construction are the most important categories of employment with 51% of total employees. Among the Hungarian Danube Regions, this rate is the highest in this sector. Wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods, hotels and restaurants, transport, storage and communication, financial intermediation, real estate, renting and business activities are the second most important categories of employment with 30% of total employees. Among the Hungarian Danube Regions, this rate is a relatively low proportion. The sectors of Public administration and defence, compulsory social security; education; health and social work; other community, social and personal service activities; private households have a share of 17 %, the lowest proportion among Hungarian Danube regions. Agriculture, hunting, forestry and fishing have a minor role in Komárom-Esztergom region with 3%.

Average Monthly Salary

Average gross nominal monthly wage reflects region's economy structure, labour productivity level and wage politics of private sector and public administration. Average gross nominal monthly salary in region of Pest was (2008) approximately 600 Euro This value is much above the average in comparison to other regions in Hungary, and it is the second largest, if we compare it to Hungarian Danube Ragions.

Life Expectancy at Birth

During the monitoring period were noted positive trend of this indicator for men as well as women. The Average Life Expectancy at Birth in the 2008 was reported within the analyzed region at 76,49 (men) and 77,59 (women). The growth of his indicator of region is high above the average of the Hungarian Danube regions: in 2001 these values were 65 and 74 years, with the worst expectations for the inhabitants among the regions analysed.

Evaluation of the development economic potential of the region

Primary Resources

Primary sources in the General Scheme dealing mainly from the perspective that creates the conditions for the formation of economic structures. The region of Komárom-Esztergom is originally a highly industrialised region. With 26% of its area being covered with forests, the mountainous area is rich in primary resources, though the economy of the region is independent from it. The raw materials sources are mainly limestone and dolomite that are being exploited at present. The former bauxite and coal (100 million tons) occurences are still being expolited, but their utilization is not economic and environmentally hazardous.

Secondary Resources

During the monitoring period number of economically active population reported positive trend. The economic activity rate in 2008 reached 59% of population aged 15-69, while this number was only 54% in year 2001. This growth rate is the highest among analysed regions.

The employment rate of population aged 15-64has risen from 51,5 to 56%, a growth again high above the national average.

The unemployment rate indicator in the region all in all reported no change from 2001 to 2008, it was 5,5% both times with big differences from one year to the other meanwhile. In 2008 employees worked mainly in the tertiary sectors especially in wholesale and retail trade and real estate business. The significant portion of workforce was employed in the industry sector as well. The region has only two institutes of higher education, there are only two non-state colleges in Tatabány and Esztergom. Share of university educated inhabitants reached 8% of population aged 25-x in 2008, which is a low proportion among analyzed regions.

Indicators of Economy for Komárom-Esztergom county

Indicator	1996	2001	2008	2008
Regional GDP per capita in PPS as a share of EU 27(25) average (%)	46,5	54,6	71,9	67,9
Labour force participation rate (%)	55,9	53,2	59	59,2
Unemployment rate in region (%)	11,5	4,6	7,5	5,2
Indicator	1996	2001	2008	2008
Number of employed in tertiary branch (%)	50,2	46,7	50,2	46,4
Share of college and secondary school educated inhabitants (%)	-	29,3	-	29,3
Tourism - average guest nights	4,1	3,4	3	2,5
Tourism - foreign visitors per 1000 inhabitants	145,7	136,1	125,7	142,2

5.6. Summary Assessment and Typology of Regions

5.6.1. Methodological background

The work on the comprehensive evaluation of development potential of regions in the Danube area was focused on the following areas:

- methodical design procedure and comprehensive assessment of development potential DONAUREGIONEN+,
- selection of indicators for comprehensive assessment by individual general schemes,
- comprehensive assessment of development potential for the whole territory of DONAUREGIONEN+ - collection and processing inputs from various partners on project.

Due to the need for unification of methodological and substantive approach different participants on the project proved to be effective come out from previous work on comprehensive development potential of the project Donauregionen. As a part of this project we created one integrated document, which at this stage of the project Donauregionen+, was necessary both to update the data and to supplement document by new regions.

5.6.2. Specification of inputs

Together with the methodology proposal and work's progress on comprehensive development potential was created a uniform approach between the new participants to set up following requirements for selected indicators:

- indicators for the evaluation must be a part of the analysis in the General Scheme,
- indicators must reflect the key factors that affect the conditions and thus the development of problematic areas in the General Scheme for the NUTS 3 level,
- selected phenomenon must be expressed in quantitative indicator of absolute or relative value, we recommend to prefer relative form,
- indicator will be expressed in units agreed in the General Scheme,
- we recommended within each General Scheme to choose a maximum five indicators,
- indicators will be processed for the years 1996, 2001, 2005 and 2008 (eventually 2007),
- all participants will agreed on selected indicators for each General Scheme.

From the text above arises that the effortfulness of selected approach has been given on the one hand because of international comparison of the regions where the risk of inhomogeneous indicators (in terms of possible differences in methodology for completing the indicator in each country), on the other hand the fact that it is a common procedure and creation of documents for comparison of diverse and thus not comparable indicators.

The methodology was designed to assess cumulatively the following indicators for each General Scheme:

Natural conditions

- Protected areas of NATURA 2000
- Water pollution-I.class
- Water pollution-II.class
- Water pollution-III.class
- Water pollution-IV.class
- Water pollution-V.class
- Atmosphere pollution-% share of emissions of the state (SO_2)
- Atmosphere pollution-% share of emissions of the state (Nox)

Settlement Structure and Human Resources

- Share of urbanization – share of inhabitants living in municipality (NUTS V.) with over than 5 000 inhabitants
- Share of inhabitants living in municipality (NUTS V.) up to 2 000 inhabitants
- Share of inhabitants living in municipality (NUTS V.) with over 100 000 inhabitants
- Number of dwellings per 1 000 inhabitants
- Share of university students per 1 000 inhabitants
- Regional density of population
- Regional vitality index

Transport

- Road Transport – Share of Highways
- Road Transport – Density of Highways
- Railway Transport – Share of Railways
- Railway Transport – Density of Railways
- Water Transport
- Air Transport – Passengers
- Air Transport – Freight
- TEN-T Corridors

Technical Infrastructure

- Natural gas
- Drinking water supply
- Wastewater treatment

Economy

- Regional GDP per capita in PPS as a share of EU 27(25) average (%)
- Labour force participation rate (%)
- Unemployment rate in region (%)
- Number of employed in tertiary branch (%)

5.6.3. Output Specification

The output of activity is cumulative assessment and determination of regionalization purpose and typology of regions.

The proposal for special purpose of regionalization is based on:

- generally accepted theoretical principles of economic regionalization,
- assessment of individual factors in the General Schemes.

Different regions in terms of their development potential are essentially divided into the following groups:

- developed regions,
- stable regions,
- stagnate regions,
- depression regions.

Mentioned typology serve us a basis for decision sphere in various countries in choosing appropriate measures for regional development, while that types of regions should correspond to differentiated regional and territorial planning policy with emphasis on:

- to create conditions for socio-economic development,
- improvements in spatial planning with emphasis on facilities and availability of the regions,
- to support polycentric system of settlement,
- to support the development and environmental protection.

The outputs are evaluated by time series of indicators for the years 1995, 2001, 2005 and 2008 (eventually 2007) in tabular, graphical form and maps.

5.6.4. The progress of work on comprehensive analysis of spatial-technical conditions and evaluation of development potential of Donauregionen+

Workflow of comprehensive assessment was carried out as follows:

- 1-st step – processing time series of indicators for each of the General Scheme for the years 1996, 2001, 2005 and 2008 (eventually 2007),
- 2-nd step – provide data from individual guarantors of General Schemes to coordinated workplace,
- 3-rd step – overall evaluation of the development potential of individual regions according to the chosen methodology,
- 4-th step – establish categories of regions into groups depending on the position they occupy, to identify differences between regions, identification of strengths and weaknesses of individual regions.

During 2010, were found at each participating project partners processed time series of indicators for each of General Schemes. These indicators were evaluated and due to the fact that the individual countries data were not complex, it was necessary to add the missing data (currently in the process). Subsequently, these indicators for each region will be evaluated according to the methodology as follows:

First step:

The determining factors of concept creation are qualified according to two aspects:

- The value of X: can vary between +3 and -3 depending on the fact, to what extent the given factor can be considered as strength (+3) or weakness (-3) for the region.
- The value of Y: can vary between +3 and -3 depending on the fact, that by changing, developing the given factors to what extent opportunities turn up e.g. in government policies, or in connection with joining the EU, and to what extent these expected, predictable changes mean threats from the aspect of using, utilizing the given factor.

Second step:

- Creating strategic programs: According to a sophisticated SWOT-analysis, experts determine new programs different to those of the development plans, – strategic programs that seem to have high probability and have higher impact on the indicators.

Third step:

- Preparing scenarios: The scenarios derive from the Y values linked to X values, i.e. following the further consideration, analysis of the external factors. During the qualification of the external factors the upcoming changes can be displayed in several variations, because the three groups of external factors make it necessary (constant, predictable, non-predictable external factors).

Value X

The value of X can vary between +3 and -3 depending on the fact, to what extent the given factor can be considered as strength (+3) or weakness (-3) for the region.

Value X is calculated for each region and generated from each indicator that shows the state of every region compared to the others from the point of view of the selected indicators. The indicators are classified in 4 groups, these

are: Natural conditions, Settlement structure and human resources, Transport & Technical infrastructure and Economy. The indicator groups now are the same as they were in the Donauregionen project, but some indicators have been changed from Donauregionen to Donauregionen+ project. The indicator changes happened because new variables were needed so that the possible changes caused by development projects could be measured. With the new indicators impacts of development projects can be shown more easily than with the ones of the former group.

Practical information – how to define the value of X

To calculate the value X, each value (the units such as average guest nights) connected to a region has to be standardized by the formula:

[(Valuei-Valuemin/Valuemax-Valuemin)-0,5] *6

where:

- Valuei is the value of the indicator of Komárom-Esztergom county
- Valuemin is the value of the region with the lowest value of the given indicator
- Valuemax is the value of the region with the highest value of the given indicator
- Valuei-Valuemin/Valuemax-Valuemin gives the so-called "Own value", this is transformed to the -3 - +3 scale by taking away 0,5 than multiplying it by 6.

The value of the indicator is calculated using the highest and the lowest value of the Danube regions, the given X value is relative and is situated in a -3 - +3 range. On this indicator axis „0" is the half of the numbers' range, as it is max-[(max-min)/2], and differs from the mean. When calculating value X, the deviation is not taken into consideration. It is worth calculating and illustrating the average (the way shown above) as well in every case to achieve the right reading of the value. This way value X can be compared to the lowest and highest value as well as the mean.

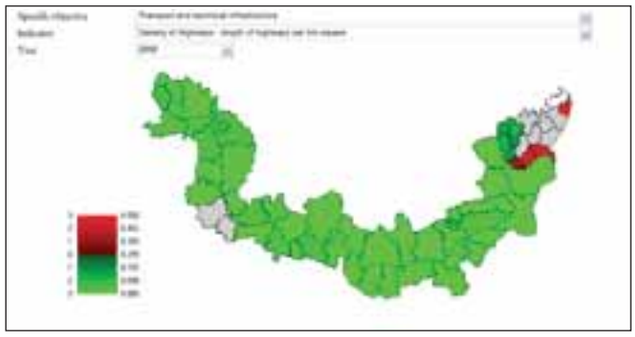
Based on this procedure:

- collectively evaluate the development potential of the Danube Area,
- we will determine the typology of regions,
- we will identify problematic areas,
- according to various General Schemes we will set of comparative advantages or disadvantages of different regions at NUTS 3 level.

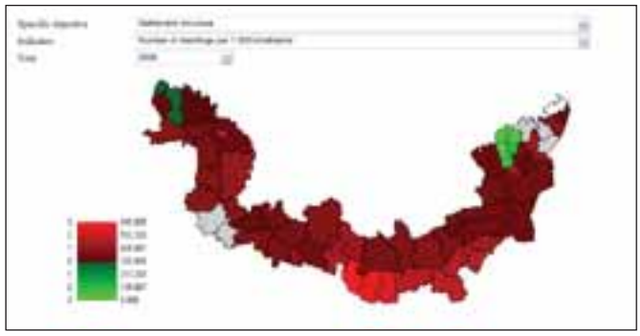
The results of comprehensive assessment within the meaning of the chosen methodology will serve as a basis for document on WP5 package of the project and will be placed on the project website.

Examples of comprehensive evaluation in D+ area:

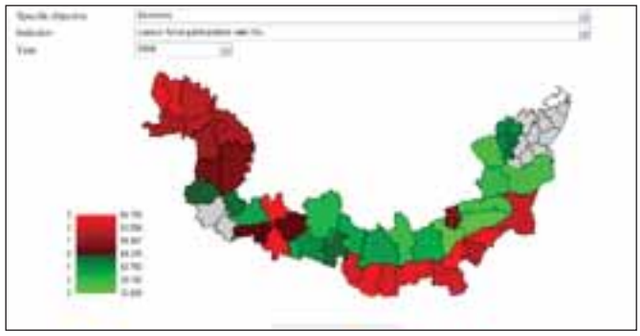
Scheme: Comparison of Density of highways in D+ area in 2008



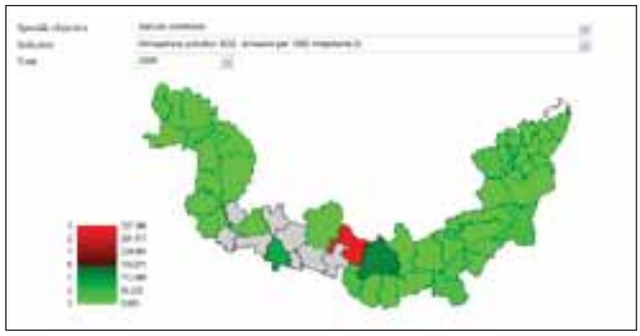
Scheme: Comparison of Number of dwellings in D+ area in 2008



Scheme: Comparison of Labour force participation rate in D+ area in 2008



Scheme: Comparison of Atmosphere pollution of SO2 in D+ area in 2008



6. WP5 – Sector Strategies Development 2010

Main objective of workpackage 5 (WP5) is identification and specification of strategic objectives, priorities and key development and strategic document of each NUTS3 region included to the area of interest (Donauregionen+). Outgoing from the WP4 and the 4 general schemes logic these data will are focused on the fields: natural conditions, settlement structure and human resources, transport and technical infrastructure, economy.

6.1. Activities realized within WP5 in 2010:

- Elaboration of the final version of WP5 forms and include it to the project internet portal
- Elaboration of WP5 guide of methodology
- Methodology development

6.2. Methodology description

6.2.1. Recommended strategy

Summing up the different approaches, the recommended procedure of strategy creation is constructed in the following way:

- The internal factors to be qualified are primarily defined by demand-orientated strategic approach.
- Supply elements are featured as additional factors.
- The change of the external factors provides the base for different scenarios, the different scenarios lead to different strategies (scenario).

6.2.2. Strategic planning in practice

First step

Further on we define the expected optimal development strategy, which derives from the internal facilities of the region, considering the opportunities ensured by the external factors and also considering the existing threats.

The determining factors of concept creation are to be qualified according to two aspects:

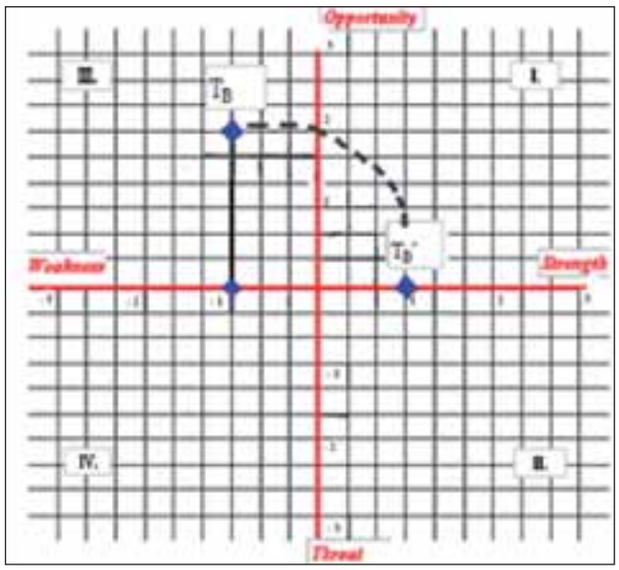
The value of X: can vary between +3 and -3 depending on the fact, to what extent the given factor can be considered as strength (+3) or weakness (-3) for the region.

The value of Y: can vary between +3 and -3 depending on the fact, that by changing, developing the given factors to what extent opportunities turn up e.g. in government policies, or in connection with joining the EU, and to what extent these expected, predictable changes mean threats from the aspect of using, utilizing the given factor.

In the process of displaying the values of opportunities--threats the following aspects were taken into consideration:

- To what extent can be improved the position of the given factor displayed in axis „x", i.e. to what extent can be shifted in positive direction towards the strengths during the present planning period.

shift of x value to y axis



During the planning period it is taken into account that areas located in the examined regions, the macro-regions and the country is developing. This is why from the aspect of defining the X and Y values of factors, displaying the „o" values means the critical stage of the work. As each value is a relative category – it means correlation to a parameter or to other regions.

Second step

Preparing scenarios

The scenarios derive from the Y values linked to X values, i.e. following the further consideration, analysis of the external factors. During the qualification of the external factors the upcoming changes can be displayed in several variations, because the three groups of external factors make it necessary (constant, predictable, non-predictable external factors). The „scenario management" is based on such scenarios, which are inevitable tools of preparing, then managing the competition for the future. A good scenario enhances an open-minded approach towards future events, and is able to create a network of systematized thoughts.

The scenarios display the potential versions of the future through the logical connection of event strings or statuses. Each story is preferably consistent, however the given scenarios serve as each other's alternatives. The logical construction of the scenarios stems from the fact, that the present situation is featured by constant (perma-

nent), predictable and non-predictable factors from the aspect of changes.

- Constant factors are those, values of which don't change in the time horizon examined by the scenario. If the given factor cannot be measured, the factor itself is considered as constant.
- Predictable factors are those, values of which can be estimated within the examined time horizon. These are manifested in the form of trends.
- The differences between the given scenarios are basically stemming from the non-predictable factors. In connection to these factors we can use their assumptions (hypotheses).

Referring to the occurrence of a given event two assumptions (yes-no) lead to two alternatives. The non-predictable events can be split further to the group of key variables and direct variables:

- The key variables are the truly independent variables, and all their potential output has to be considered. These changes provide the core of the scenarios.
- The direct variables also cannot be predicted, but depend on the key variables, thus for each key variation a direct variable can be linked.

In order of consistence the given scenarios have to meet several important requirements:

- Each scenario must contain the constant factors.
- Each scenario must also contain the predictable factors.
- The different values of the non-predictable factors are displayed in different scenarios.
- In a scenario the key variables can be featured only by a single defined value.
- The Y values can be different and its different combinations result in different scenarios. The YB value can be one value or two independent values.
- The time frame must be set for the expected changes. Usually 1 period is 7 years.

6.2.3. Analysis and display of the most favorable scenario

The phase of scenario analyses terminates by the display of X and Y values – linked as factors determined by the most favorable scenario – examination of their location, dispersion and their textual analysis. This assists in determining the future prospects, and trace of the objective pyramid based on it.

In the Donauregionen+ project we already have the sectoral schemes.

- The factors located in domain I. are the so-called breakout points, which support an offensive strategy.
- The impact of factors located in domain II. indicate maintenance of a stabile position, thus supporting a diversified strategy.
- The impact of factors located in domain III. holds instability and risks in itself, leading to a need for a change-orientated strategy.
- The factors located in domain IV. indicate rescue actions, which require defensive, crisis managing strategic steps.

6.2.4. The system of objectives

During strategy creation the requirement and need for changing the values of the region's internal factors is concretely defined. In case of each factor the need means achieving a new status.

The system of objectives thus partly and totally defines a future status determined by the facility of the regions and the external opportunities.

From the aspect of territorial policies the following requirements can be defined towards strategic systems of objectives linked to specific territories:

- has to be operative in perspective (stability);
- has to adopt itself permanently to the changing market relations (flexibility);
- has to strengthen regional/local conscience, affection;
- has to ensure the continuous improvement of living conditions (environment, income);
- has to make reachable the different levels (national, macro-regional and global) of regional relations.

Display of objectives in temporal perspective

In this case in the peak of the so-called objective pyramid there are the future prospects, which are defined considering long-term predictions and plans. On the whole the future prospects define such a new status of the region, which can be featured by a higher level and positive value in the direction of the shift.

On the long term groups of objectives can be defined, which back up the development priorities. The groups of objectives consist of strategic objectives, which can be detailed according to professions and also according to temporal scheduling.

6.2.5. Priorities

During strategy creation not only the examined internal factors' locations' dispersion in the four zones has to be examined, but also their distance from the zero point.

In the Donauregionen + project we locate the NUTS 3 indicators by sectors and see its dispersion. We also see that in which part of the diagram the indicator cluster is located.

The A 1 region has the highest priority, it is located in the "minus-minus" zone, and here the intervention is the most important. If there is no intervention here, this field will be fall down. After the A 1 zone the next important

is the A2, A3 zone, as we go up in the minus zone to the positive zone (from bottom to up) and examine the other zones.

Connection of objectives and programs

Every objective needs to be supported by at least one program. However, one more program is needed which supports the institutional development. So an institution development program is necessary. Those programs are efficient which support more objectives at the same time.

6.3. Strategy example

6.3.1. Basic indicators

An example of the strategy development was made for Hungarian NUTS3 region Komárom-Esztergom county. The basic indicator values of "X":

Indicator		X Value
Natural Conditions	Protected Areas	-1,00
	Water Pollution	2,69
	Nox Pollution	1,77
	Landfills	-0,92
Settlement Structure & Human Resources	Inhabitants living in municipality (NUTS V.) with over than 5000 inhabitants	-0,05
	Dwellings per 1000 inhabitants	-1,35
	University students per 1000 inhabitants	-2,16
	Density of population	-2,92
	Vitality index	1,19
Transport & Technical infra-structure	Motor and Expressways (Density)	-1,80
	Railways (Density)	-2,32
	Air Transport - Passengers	-3,00
	TEN-T corridors	-1,46
	Natural Gas	3,00
	Drinking Water Supply	2,63
	Waste Water Treatment	1,77
Economy	GDP per capita in PPS as a Share of EU 27 (25) Average	0,03
	Labour Force Participation (%)	2,06
	Unemployment Rate (%)	-0,95
	Number of Employed in Tertiary Branch (%)	-1,48

According to the analysis, the state of Natural conditions is the best, and the position of Settlement Structure & Human Resources is the worst compared to the Danube Regions in Komárom-Esztergom County among the indicator groups. Focusing on the X values: the best values come from Natural gas (3), Water pollution (2,69) and Drinking water supply (2,63). The lowest numbers are connected to Air Transport (-3, as there is no airport in the county) and Population density (-2,92, because the high value of the Danube Regions' capital cities to which the other regions are compared – looking at the mean, this is obvious).

The predicted changes until 2020 according to value Y

In practice the value of Y can be calculated by analyzing the existing development plans and strategies of each region. In our case 16 planning documents were analyzed in 6 geographical levels. In NUTS0, NUTS2 regional level the measures concerning the given region shall be selected and taken into consideration. Sub-NUTS3 level development plans should also be analyzed: the small regional (LAU1) and local, settlement scale (LAU2) as well as the point wise measures (the development plan of a part of a town for example).

Before the list would be completed by adding the relevant indicators to the measures, it was important to select the measures that might be realized by 2020. In the Hungarian example, it is important to check whether a measure is connected to the Regional or the Sectoral Operative Programs of the National Development Plan. In case the measures are connected to the objectives of these documents, the financial support seems to be ensured, therefore there is a high chance of these measures to be implemented by 2020.

The result of document analysis - the values of Y for Komárom-Esztergom County

Indicator		Y value
Natural Conditions	Protected Areas	-0,3
	Water Pollution	-0,4
	NOx Pollution	-0,5
	Landfills	+0,2
Settlement Structure & Human Resources	Inhabitants living in municipality (NUTS V.) with over than 5000 inhabitants	-1,0
	Dwellings per 1000 inhabitants	+1,0
	University students per 1000 inhabitants	+0,3
	Density of population	+0,3
	Vitality index	-0,3
Transport & Technical infra-structure	Motor and Expressways (Density)	+0,3
	Railways (Density)	+0,1
	Air Transport - Passengers	0,0
	TEN-T corridors	+0,4
	Natural Gas	0,0
	Drinking Water Supply	0,0
	Waste Water Treatment	+0,2
Economy	GDP per capita in PPS as a Share of EU 27 (25) Average	+0,6
	Labor Force Participation (%)	+0,3
	Unemployment Rate (%)	+0,1
	Number of Employed in Tertiary Branch (%)	+0,6

According to our examination the changes are hectic, there are many indicators in which a high change is likely to happen, though in case of many indicators the changes are to happen in an undesired direction. A negative tendency is continuing of suburbanization, as the bigger towns are not attractive anymore. This is why the number of inhabitants living in municipalities with over 5000 inhabitants is decreasing the most. Even among the same general schemes there are big differences: some changes are positive, some are negative within the same indicator group. The implementation of the measures in the existing planning documents is not bringing the region to a better position until 2020.

6.3.2. Strategic development measures

Identification of SWOTs is essential because subsequent steps in the process of planning for achievement of the selected objective may be derived from the SWOTs. The SWOT-analysis for Komárom-Esztergom county was prepared during a stakeholder meeting in the city of Komárom, held on 2nd February 2010. Besides the expert team and the host local and regional government, the conference was attended by NGOs and companies from the county.

After the SWOT is done, the sketched opportunities are compared to the X and Y values and to the scenario created by these measurements. With the help of the sectoral experts, the differences between the SWOT analysis and the existing development plans shall be shown: we might find some strengths, opportunities that can help or threats that can hinder the development of the region - factors which the existing development plans and strategies do not calculate with.

Strength	Weakness
Location Infrastructure Transnational enterprises Industrial parks Euroregions	Few bridges over Danube Few ports Tourism (attractions) Comprehensive tourism organisation Utilization Danube R&D potential
Opportunity	Threat
Cross-border cooperation Water route Wellness Development of transport systems Clusters, industrial integration Cultural heritage Agriculture, water reservoirs Railways	Many organizations Unharmonized development actions Subordinate role in the Mid-Transdanubian Region Higher competitiveness of Slovakia Risk of drinking water pollution Property realtions Absence of vocational training

In the case of Komárom-Esztergom county, we found that there are several possible programs and projects, which do not take place in the development plans but would have a high impact on the indicators through their objectives:

Programs	The region specific objective: Prosperous region in a logistic area						
	Life quality		Economic competitiveness				
	Better environment		Lower production costs		Higher productivity	Better adaptation	
	State of natural conditions	Accessibility, connectivity	Water reserving capacity, irrigation	SME Co-operation	Attractiveness of tourism	Qualification	Labor force
Education							
Vocational training				x	x	x	x
Languages				x		x	x
Water management							
Water reservoir	x		x				
Canal lines	x	x	x				
Oxbow lake rehabilitation	x						
Organizational development							
Tourism Destination Management organization				x	x		
Development clusters				x			
Transport infrastructure							
Bridge		x					
Railways		x					
Logistic centres		x		x			
Cross Danube Region		x		x	x		x

- The case study's strategy recommends the development of vocational training and education, as the development plans support education, but they do so only on elementary level or by the assistance of graduate programs. The firms located in many of the county's industrial parks would demand technical and vocational education instead.
- According to experts, climate change is supposed to have a greater impact on River Danube: the level of the water is likely to decrease in the next couple of decades. Even the experts of environmental protection support the idea of building water reservoirs along the river, so that water coming up during floods could be held back in aquifers and be utilized in agriculture, natural protection and tourism.
- A comprehensive Tourism Destination Management organization is missing in the county. There are many isolated development plans concerning the tourism of River Danube for example, and there are many organizations that do not cooperate or they often even struggle against each other, and thus, they lack success. Connected to organizational development we shall mention the need and possibility of creating development clusters for SMEs
- The county has good railway connections, as its lines are historically of high importance. The existing development plans do not put enough emphasis on their expansion, whilst the opportunities for building logistic centers. New highways and connections can also be linked to the existing ones.
- The expansion and strengthening of the current Euroregion can also be a program proposed by the experts.

(see new x values)

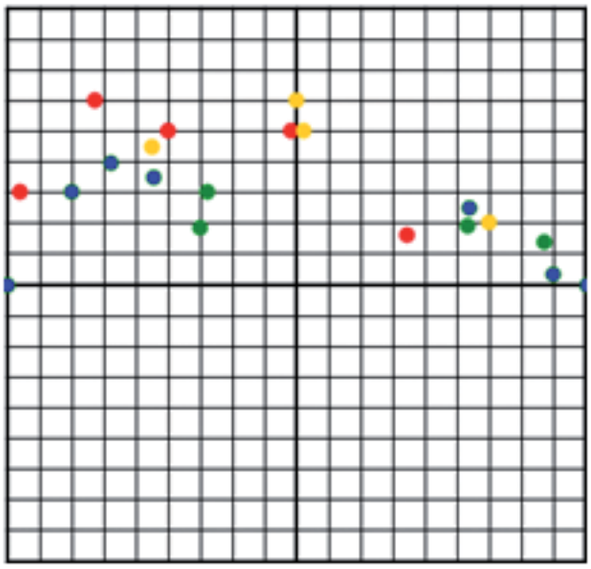
With the implementation of all recommended development measures, a new scenario can be foreseen according to new Y values. In this scenario the values of Y grow, thus the length of the vectors elongate. This means, that with the realization of the suggested measures, the analyzed

indicators can much more turn into strengths of the region than they could only by implementing the measures of the existing development plans and strategies concerning Komárom-Esztergom county. These changes are shown on the next figure:

The strategic objectives and measures can later be combined for all regions involved in the project. This way a common planning system will be made for whole Donauregionen+ regions.

change of Y value in comprision with original status

new x values



7. WP6 – Crossdanube Strategy Development 2010

7.1. Objectives

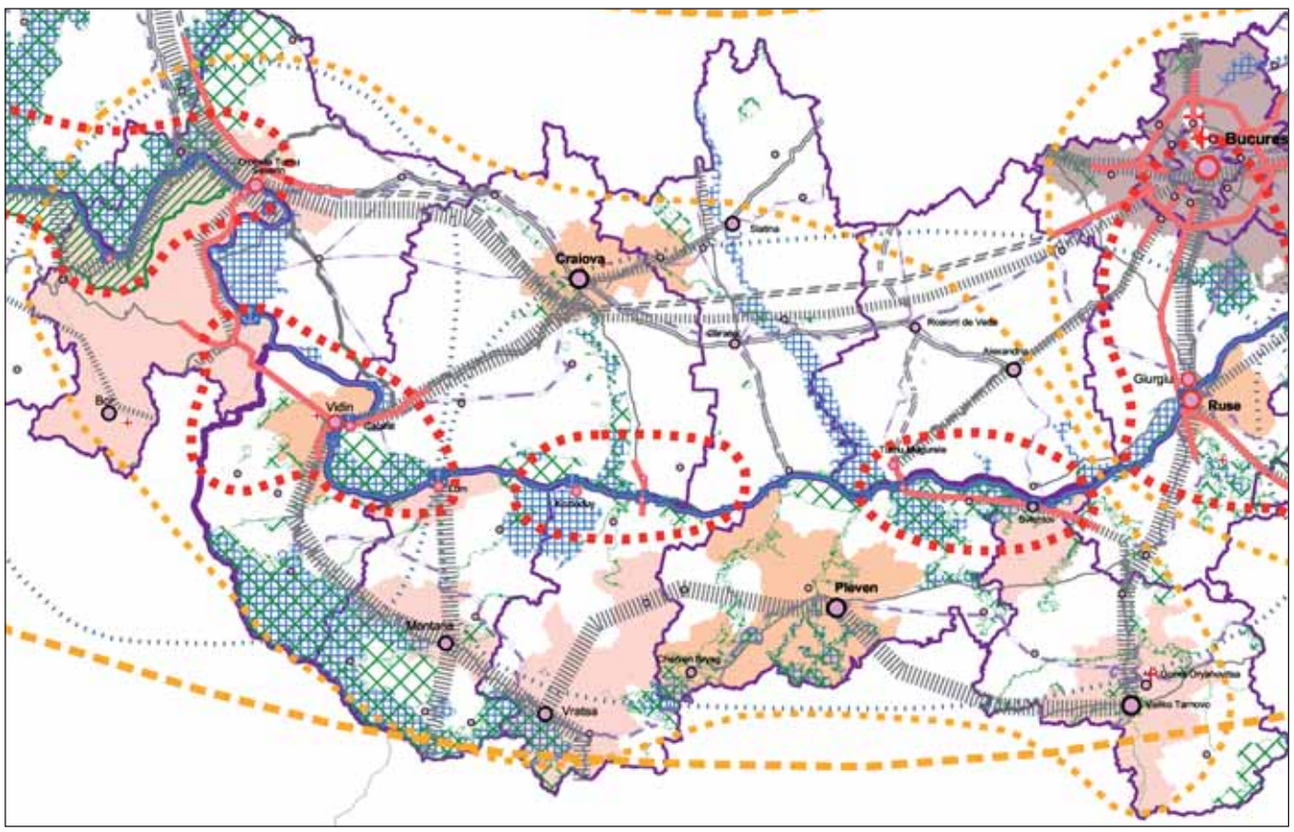
7.1.1. General objective

The general objective of Workpackage 6 (WP6) is elaboration of development strategies for 5 ARGE (cross-border) subregions and 21 Cross-Danube regions, defined in (previous) project Donauregionen extended also to the territory of new partners regions in Croatia, Moldovia and Ukraine.

7.1.2. Specific objectives

For successful realization of general objective the regional partnership of each Cross-Danube Regions ("Cross-Danu-

Example of CDRs core areas (in Serbia, Romania and Bulgaria area) – red circles



be Strategy Workshop" – CDSW) will be set up and project methodology will be created.

The tasks of WP6 will be carried out within 21 CDRs defined by previous DONAUREGIONEN project (finalized in 2008). The high number of CDRs located in different countries cause a lot of specifics by which CDRs vary from each other. This concerns also the different level of cross-Danube linkages within particular CDRs.

7.2. Tasks/objectives for 2010

For successful WP6 general objective fulfillment specific tasks were identified during project workshops in 2009 (3rd workshop1) and 2010 (4th – 6th workshop). According tasks identified at project workshops (3rd – 6th) the following activities/outputs were done during year 2010:

3. workshop (12/2009)	
Task/objective	Elaboration of the model and its implementation on PIP on example of CDR Komárno - Komárom
Work done	WP output example (4)

4. workshop (03/2010)	
Task/objective	All Slovak and Hungarian partners will propose and verify the detailed methodology including: definition of the specific area of CDRs, procedure of the CDR strategy development on the basis of the outputs of WP5 (guideline and trainings), setting up of the working groups (CDR Komárno – Komárom, potentially Esztergom-Štúrovo) and organizing of the 1st joint meeting).
Work done	WP methodology (1) CDRs activities (2)

5. workshop (06/2010)	
Task/objective	The WP6 guide will be prepared by ERDF PP1 and send to the partners
Work done	WP guide (3)

6. workshop (09/2010)	
Task/objective	The WP6 guide will be given to the portal To complete the GIS data according to the guide and send it to ERDF PP1[1]
Work done	WP guide (3)

(see Example of CDRs core areas (in Serbia, Romania and Bulgaria area) – red circles)

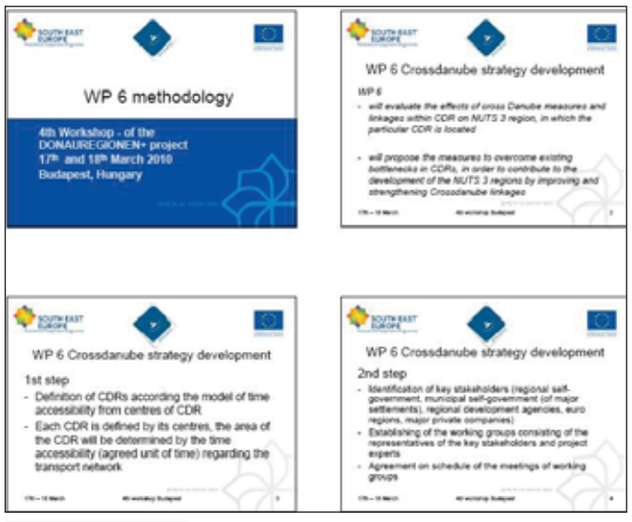
Serbia-Romania-Bulgarian subregion (larger orange circle) lies on the territory of three countries: Serbia, Romania and Bulgaria. This subregion has relatively lot of problematic areas regarding to settlement and demographic structure. Especially Romanian part of the subregion belongs to less developed areas in the whole area. Four cross-Danube regions were defined there.

7.3. Works done in 2010

7.3.1. Workpackage Methodology

According tasks identified at 3rd and 4th workshops the following methodology proposal was presented. WP6

Methodology presentation at 4th project workshop in Budapest and a part of methodology presented



1 3rd workshop was organized in December 2009, however defined tasks for year 2010

proposal methodology was presented at 4th project workshop in Budapest, Hungary (17. – 18. March 2010). Methodology includes CDR core area definition (see paragraph below), steps for successful WP6 objectives fulfillment and output describe. A part of methodology proposed can be seen in paragraph below.

A part of methodology:
CDR core area is defined according time accessibility model. GIS project data are used as input data for time accessibility calculations. Time accessibility calculation was provided according Donauregionen+ project agreed methodology. CDR whole area consists of NUTS3 regions. For analysis, strategy development and mutual comparison is used region at NUTS3 level. Each CDR consists of at least two NUTS3 regions (divided by Danube River) from different countries. Detailed information about CDR identified in previous project can be found at official Donauregionen (previous) project website: http://www.donauregionen.sk/project_outputs.html.
(see Methodology presentation at 4th project workshop in Budapest and a part of methodology presented)
Source: http://www.donauregionen.net/workshop4.html (official project website)

7.3.2. Cross-Danube Regions Activities

Tasks intent on setting up the specific working groups and organizing Cross-Danube Strategy Workshops – CDSW (task for all project partner, because all project partners are involved in) for all ARGE subregions has been extended till 2011 (according 7th workshop conclusion and recommendation). However some of project partners have set up working groups and organized CDSW already.

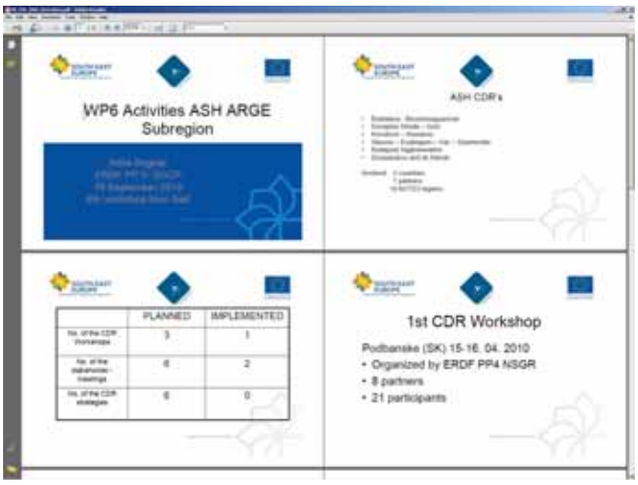
According task identified at 4th workshop working group for CDRs located both in Slovakia and in Hungary project area was set up and 1st "Cross-Danube Strategy Workshop" – "CDSW" was organized in April 2010. The main objectives of Cross-Danube Strategy Workshops are to discuss methodology more detailed and to discuss next steps within WP6.

(see 1st "CDS Workshop" between Slovak and Hungarian partners in Podbanské, Slovakia)
(see A part of CDR activities presentation)

For each CDR one project partner, as responsible person, was designed. Responsible project partners have to provide activation of (canvassing for) relevant stakeholders of each CDR. Coordination of these activities is provide by organizing of work meetings (workshops) at cross-Danube level (CDS Workshops) and national level (National Workshops) too. In the year 2010 there were organized several "Cross-Danube Strategy Workshops" and number of "National Workshops". For each CDR at least one "CDS Workshop" has to be organized. Number of "National Workshops" is vocational and can be provided according specific area of interest needs.

1st "CDS Workshop" between Slovak and Hungarian partners in Podbanské, Slovakia

A part of CDR activities presentation



7.3.3. Workpackage Guide

A part of WP6 Guide presentation

WP6 Guide in PDF format

According tasks identified at 5th and 6th workshops WP6 Guide (version 1.1) was prepared by responsible partner ("ERDF" PP1 – Inštitút priestorového plánovania – Institute of spatial planning, Bratislava, Slovakia). WP6 Guide was elaborated according methodology presented at 4th project workshop in Budapest. The main objectives of WP6 Guide are

- to describe methodology more detailed,
- to present final WP6 output (publication) content structure.

WP6 Guide was presented at 6th project workshop in Novi Sad, Serbia (16th September 2010) and can be found at official project portal2.

(see A part of WP6 Guide presentation)
(see WP6 Guide in PDF format)
Source: http://www.donauregionen.net/workshop6.html (official project website)

7.4. Output Example – Cross Danube strategy

The WP6 objective fulfillment is realized by identification of existing measures and projects from different types of documents, programs or conceptions (documents of structural and regional policy, physical planning documents, social economic development programs, strategies of cross border cooperation etc.) related to particular CDR. The summary will be focused on all relevant documents at national, regional, cross border and local level related to particular CDR.

The final output of WP6 will be Summary description in form of publication for each CDR. The structure of contents of the Summary description is as follow:

- Identification of the area of CDR
- Analytical description of current situation within four general schemes
- Identification of relevant stakeholders within CDR
- Identification and evaluation of relevant measures/projects with focus on cross border linkages
- SWOT analysis
- Map outputs
- References

Data fulfillment within workpackage final output (Summary description) will be provided via internet using official Donauregionen+ D+WEB Server. The specific web form will be created for data fulfillment according specific workpackage needs.

7.4.1. Identification of the area of CDR

This Cross-Danube region lies in the area of ARGE Subregion ASH (Austria, Slovakia and Hungary). CDR consists of two NUTS3 regions (Nitra County and Komárom-Estergom County).

2 http://dplus.infoprojekt.sk/Methodology/WP6Crossdanube/61Developmentstrategyforsubregion ASH.aspx, available for register users (Donauregionen+ project partners) only

(see Example of CDR (Nitra – Komárom-Estergom) core areas – two red circles in the middle of the picture)

7.4.2. Analytical description of current situation within four general schemes

Analytical description was elaborated according WP4 data fulfillment. The following pictures show examples of analytical description elaboration for model CDR (Nitra – Komárom-Estergom) through official D+WEB Server.

(see Example of CDR (Nitra – Komárom-Estergom) analytical description)
Source: http://dplus.infoprojekt.sk/ (D+WEB Server)

7.4.3. Identification of relevant CDR stakeholders and key documents

Stakeholders:

- regional level: Nitra self-governing county, Komárom-Estergom
- municipality level: Komárno, Nové Zámky, Komárom, Tata, Tatabánya

Key documents:

- national level: Operational program Transport (SK), Regional Operational Program (SK)
- regional level: Program of economic and social development of Nitra County, Regional physical plan of Nitra County

Example of CDR (Nitra – Komárom-Estergom) analytical description

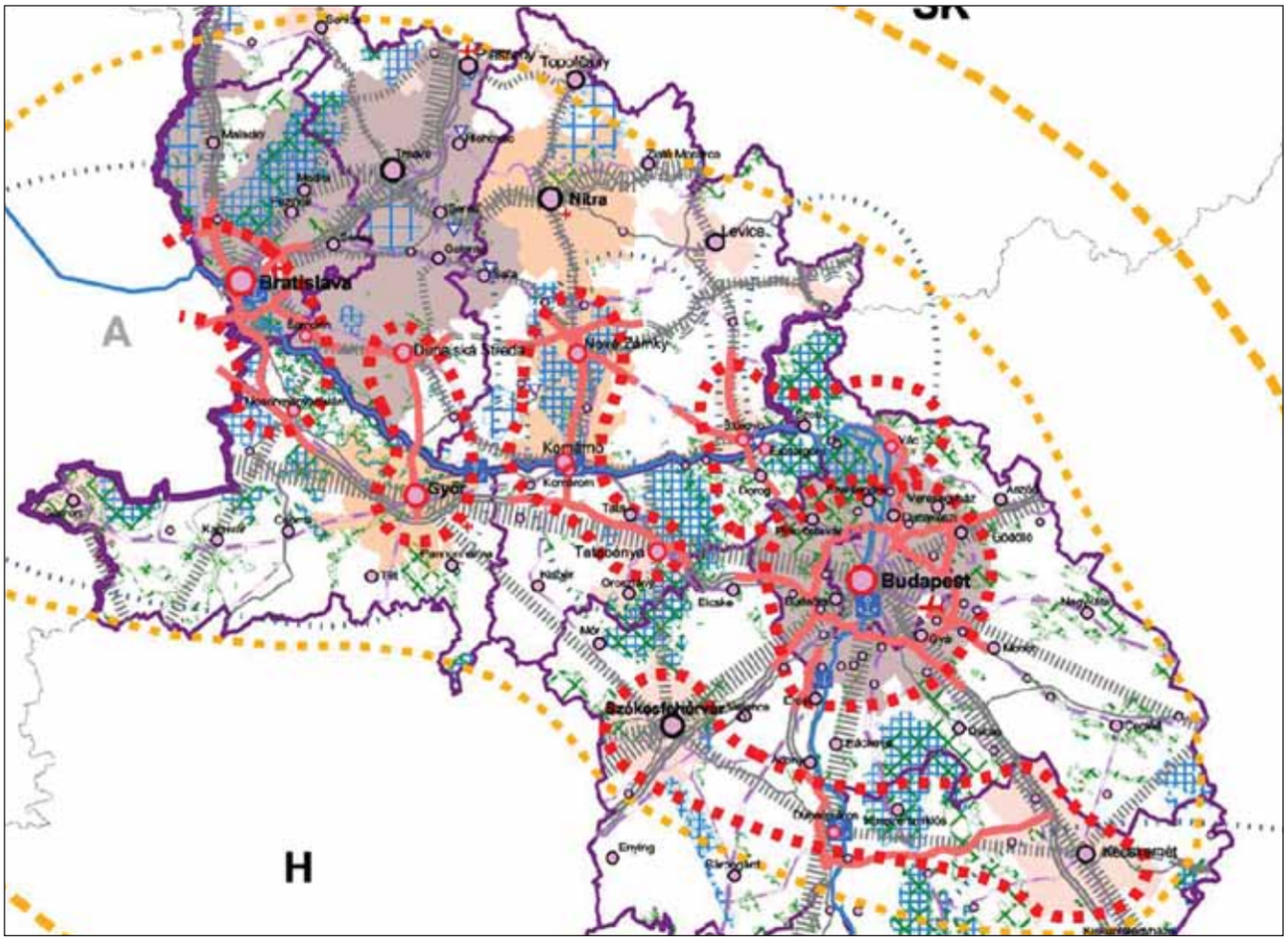

NUTS3 Region

GS Natural Conditions


NUTS3 Region

GS Natural Conditions

Example of CDR (Nitra – Komárom-Estergom) core areas – two red circles in the middle of the picture



7.4.4. Identification and evaluation of relevant measures/projects with focus on cross border linkages

- will be identified according WP5 data fulfillment

7.4.5. SWOT analysis

SWOT analysis was elaborated according WP5 data fulfillment. The following pictures show examples of SWOT analysis elaboration for model CDR (Nitra – Komárom-Estergom) through project portal.

(see Example of CDR (Nitra – Komárom.Estergom) SWOT analysis (for Nitra County))
Source: http://dplus.infoprojekt.sk/ (D+WEB Server)

7.4.6. Map outputs

CDR strategy map outputs will be available after finalization of data fulfillment through project portal. The first map outputs are planed to be presented in the year 2011.

7.4.7. References

DonauDatenKatalog (as a one of the project outputs) will be used as a basic platform for references. Finalization and presentation (the first draft version) of DonauDatenKatalog is planned in the year 2011.

8. WP7 – Comprehensive strategy 2010

8.1. Objectives and tasks for 2010

Activities realized in 2010 within WP7 – Comprehensive strategy:

- To prepare the methodology of comparison of CDR strategies in project area (ARGE sub regions)
- Preparation of the National Background reports

8.2. Works done in 2010

Works on WP7 has started on 1st July 2010. In the year 2010 Comprehensive strategy guide (part A - Analysis and comparison and part B - National scenarios) have been done.

Main goal of WP7 - Comprehensive strategy is to find conditions and ways for territorial cohesion of Donauregionen states, as one of the preconditions for overall cohesion. Basically, the main aim of the project will be to express conditions and ways of territorial cohesion for narrowed area oriented on region adjacent to the Danube River that is subject of previous work packages solution.

The role of WP7 is to define the conditions and ways of Donauregion countries territorial cohesion. The WP7 scenarios objective we propose as follows: „Donauregion as the Development Axis within the European Space".

Transformation of Donauregion (D+region as its core area) into development axis of European importance requires a common strategy of participating countries.

The success of common strategy will be derived from cooperation quality of participating Danube regions, as well as from involvement and support of those endogenous and exogenous resources of ARGE Donau subregions and Cross Danube regions which contribute to their spatial integration, respectively their territorial cohesion.

The scenarios defined in the project application can be expressed as follows:

- promotion of conservation and restoration of the endogenous sources focusing on the internal cohesion (pessimistic scenario)
- promotion of the endogenous sources with external support focusing on the subregional cohesion (optimistic scenario)
- promotion of the endogenous areas sources focusing on the crossdanube regional cohesion (realistic scenario)

The basis for the scenarios should be the results of the WP5, supported with the information from the WP-s 4 and 6.

The time frame of the evaluated indicators in the WP5 and WP6 is from seven to ten years. It means the year 2017-2020. But in the scenarios it is necessary to show the development trends in the longer time frame – in the next 20 – 25 years. It depends on the long time cycles of the activities, which influenced the development of the territorial cohesion. Therefore the scenarios have to go over the time expressed in the WP5 and probably in the official country documents targeting the investigated region as well.

8.3. Creating of scenarios

Projected scenarios for development of individual Donau subregions will be derived from ideas rooted in national development scenarios of individual states (i.e. state development trends) as well as from scenarios/development trends of regions that comprise each respective Donau subregion. Such national and regional scenarios/development trends will obviously be tied, to certain extent, also to all-European development and its scenarios and trends. Influence of EU, along with the extent of its impact on given national and regional development trends, will be mostly determined by development self-initiative and ability to utilize internal development potentials of respective member states – in our case this translates into actual Donau subregions.

As for development scenarios of respective Donau subregions, it is vital to above all concentrate on development initiatives, options and trends derived from internal potentials, given facts and particularities.

Any basic scenario-related considerations should originate from the past ideas of maintaining development in the last ten to twenty years. Such knowledge can be used in each respective Donau subregion as a basis for formulation of various scenarios 0150 – ranging anywhere from pessimistic to optimistic. It should be an expert's examination of how sustaining of existing development ought to be perceived in the timeframe of the next ten to twenty years. It should be determined whether or not sustaining of current development gives reason for optimism or pessimism in development of given subregion.

Implications assessment of sustaining the current development will be done by knowing the territory and obtaining the information and data from previous work packages for individual general schemes.

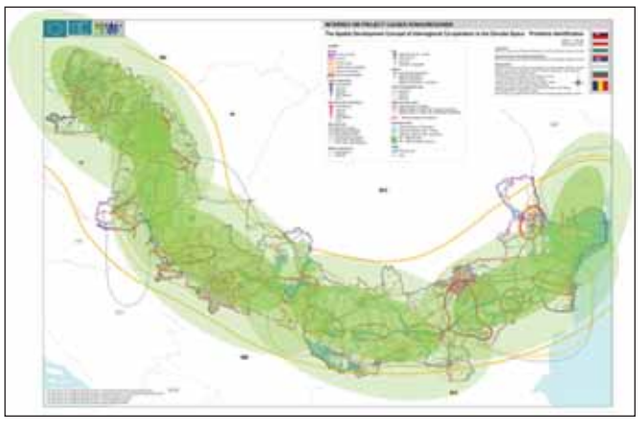
The starting points of three scenarios should be derived from the following hypotheses:

8.3.1. Optimistic scenario

Optimistic scenario works with an assumption of optimal utilization of all possible resources and potentials for further development of given region. It is well in correlation with optimistic development of EU and its cohesion policies, supporting cohesion oriented scenario of EU-27 European territories (scenario called also as „Danubian Europe"). Resulting from such development, one could expect to see spatial development of suburban character around major suburban centers of supraregional and even state-wide importance; and development of other settlement centers of regional and subregional Importance along with their suburbs – thus securing proportionally balanced development of the whole territory. Positive development will be seen in territories of a high tourist potential, which hence will create more substantial economic as well as settlement-related development effect. In terms of settlement system, this scenario will represent considerable polycentric settlement development that would minimize marginalized territories. Along with that, infrastructure will be developed both as impulse and induction factors. One can expect favorable/more favorable development of population growth, mostly due to immigration.

Optimistic scenario represents a strong assumption of social, economical and territorial cohesion on all levels – regional, national and international alike.

Optimistic scenario further embodies a wish of how the development in given territory could/should proceed. Thus, it expresses a desired end-state, which shall be pursued in the long term horizon.



Source: Map from Donauregionen project

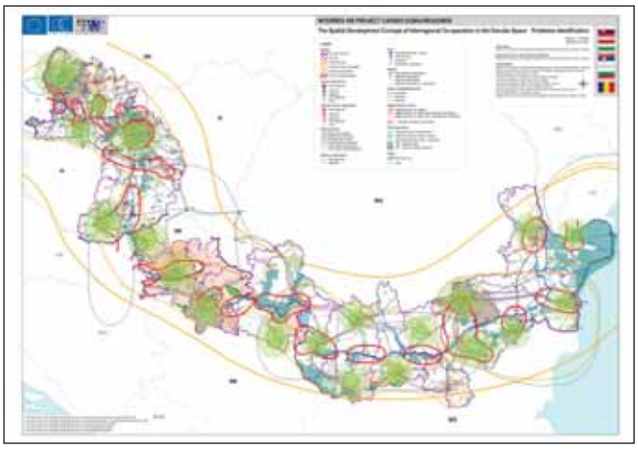
8.3.2. Pessimistic scenario

This model is built around an assumption of high concentration and locking of cities and regions away from other cities and regions. The main development of this scenario, as seen by decisores and stakeholders, lies in concentrated development on the local level in strong competition with other territorial units. Basically, these are the trends that lead towards strengthening of individual cities, and possibly also some other for-development-suitable municipalities on the local level, at the expense of mutual cooperation. Also, such interests subordinate the development of infrastructure, which is mostly focused on the local level and on certain selected parts of superior transport networks. This scenario also assumes lower and much slower economic development, partly caused also by having fewer options to utilize various support funds in the given territory. Funds, even if obtained, will most likely end up being used for concentrated development in the centers of choice. Development of the selected cen-

ters will strongly influence migration of the population. Suburbs of these centers will most likely witness creation of centripetal flows of inhabitants seeking work and services in the closest municipalities. More remote territories will lack sufficient development impulses and the concerned territories will be susceptible to marginalization (further marginalization?) and depression, both economically and socially. Settlement system in terms of polycentric conception will be rather limited with considerably marginalized territories. One can expect rather unfavorable development of population growth, along with strengthened emigration from the given territory.

Based on the above-stated, one can hardly assume further development of intraregional, regional and wider inter-regional cohesion (social, economical and territorial).

Pessimistic scenario can be perceived also as sort of warning scenario. This is the scenario pointing out to the undesirable development due to neglecting or failing to adopt critical decisions – in the interest of utilizing internal territory potential and currently insufficient utilization level of various support funds of different sources.



Source: Map from Donauregionen project

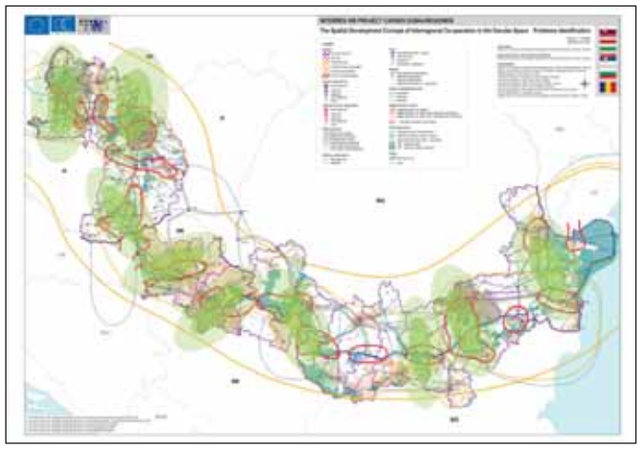
8.3.3. Realistic scenario

Development assumptions under realistic scenario are derived both from realistic estimates of options for generating new economic activities and from approved and expected infrastructure development activities. This scenario operates with assumptions of development in major settlement centers, as well as with support and development of centers in rural areas. Centers in rural areas should saturate requests for basic and higher social equipment. Infrastructure development is based on its development objectives according to the optimistic scenario, in the interest of establishing connection between the development centers, as well as linking them with adjacent regions. Its realization; however, will not be accomplishable to a full extent within the expected time frame (2030 time horizon). Population growth development expects certain stabilization in centers.

There will be positive trends in the development of territorial, economical and social cohesion. Territorial cohesion, in international context, will be apparent mostly among the major centers; more specifically, between centers on one side of the border and agglomerative municipalities on the other – depending on conditions and accessibility.

Realistic scenario embodies estimation of realistic options for fulfilling certain basic elements of desired development, as expressed in the optimistic scenario, within the given time horizon.

Generally it can be said that the term “optimistic scenario” will primarily encompass general economic and social development in terms of increasing GDP, generating of new job opportunities, developing infrastructure and securing social comfort. On the other hand, such a development might be perceived as negative when it comes to the matters of environmental impacts, landscape conservation and protection of natural resources. Each scenario will be described objectively in accordance with corresponding general schemes, where individual viewpoints on characteristics of each individual scheme are to be addressed. It is necessary to perceive and bear in mind possible conf



Source: Map from Donauregionen project

rontations/connections between these different viewpoints–while formulating hypotheses for each scenario (in form of a table); and especially while preparing and forming the final interpretation of possible development in the recommendations section.

8.3.4. WP7 outputs

Outputs from WP activities are:

- description of scenarios, each scenario will be explained individually by:
  - problem definition
  - main challenges
  - (necessary) inputs of cooperation areas
  - contribution of D+ project
- the promotions in the three strategic goals of each scenario will be characterized by:
  - spatial factors
  - transport factors
  - socio-economical factors

- environmental factors
- the implications of these factors will be explained as well.

9. Conclusion

The 2010 was very important year for the D+ project implementation. There were a lot of obstacles connected with administrative issues, public procurement procedures, project financing etc. in individual D+ countries. Due to the flexibility and involvement of LP and PPs we can say we are in line with project time schedule.

Due to the number of project partners, the whole administration, coordination and management was rather difficult. Therefore we have decided to concentrate on intensive use of internet oriented tools. The D+Web was further developed with two servers, D+WebServer and D+GISServer. D+WebServer involves the model of ARGE Donau Region (ADR).

This model is mapping the status of individual Donau Regions (DR - NUTS 3 regions, lying on the Danube from Slovakia till Ukraine), so called Cross Donau Regions (CDR – groups of DRs lying on opposite sides of Danube having interregional cross Danube connections) and ARGE Donau Subregions (ADSR – group of CDRs with specific social, economic and physical geographical properties).

Comparative analyses of DRs are the subject of WP4. WP5 deals with the mapping of DR strategies. WP6 is focus on CDRs comparative analysis as well as strategy identification. Its resuls are grouping according the ADSR. WP7 concentrates on the scenarios of the whole ADR.

The narrative and tabular description of each DR, CDR, ADSR as well as whole ADR we intend to integrate with the GIS database in D+GisServer in order to support the planning activities of involved DRs and Danube coutires.

According the original objective of ARGE DONAULANDER - Working Group of spatial planning (ARGE) where since 1993 the idea of the Concept of the cooperation of the Danube regions, cities and ports was permanently developed we are developing the tool for support of spatial planning activities of Danube regions.

In the year 2011, which will be crucial for the D+ project success we will continue with the project activites. We will concentrate for the completion of the WP5, WP6 and WP7 activities. Special attention will be given to D+Web and mainly its components D+WebServer and D+GISServer.

1 Note: GIS data fulfillment has been extended till 2011