Project Introduction

Project partnership

The project involves 19 project partners from 8 Danube countries.

The background of the project partnership represents Spatial Planning Working Group of ARGE DONAULANDER (ARGE WG SP), where all states participating on the project have their representatives during last 15 years. These public bodies (ministries and self-governing regions) as official public institutions responsible for planning at national and regional levels represent the basis of the project partnership, guarantying the applicability of the project outputs and results. The second group of project partners are professional government and non-government planning organisations of all participated countries, which have long term experience of mutual cooperation within the ARGE DONAU activities, respectively in Interreg IIIB project Donauregionen (D-project). Project partners from each country were responsible for the coordination of specific project activities, but the data and planning activities in each country have been done by the planning organisation from the specific country, which are also responsible for their validity.

Project background

ARGE WG SP agreed in 1994 a concept of how to contribute, from the position of the spatial planning, to the development of Danube regions. The idea is to create a permanent, flexible planning system, enabling to their customers the share of planning information within the Danube area.

The concept, how to build it, consists of 3 phases. The 1st phase has been done under InterregIIIB CADSES program and the D-project was the 1st - analytical phase. The project Donauregionen+ (D+ project) represents the 2nd - synthesis phase, where mapping of strategies on regional, Cross-Danube and along Danube levels represents the Joint Danube Regions Development Strategy (D+ strategy) as the main project objective. The 3rd - implementation phase, will be Donauregionen++ project, with the support of implementation of the D+ Strategies in the planning of involved Danube regions, cities and ports.

Each phase is divided into 4 sectoral general schemes namely (a) Environment, (b) Settlement Structure & Human Resources, (c) Transport & Technical infrastructure and (d) Economy. Each phase ends with integration of particular sectoral approaches. (see Scheme on page 4)

Addressed problem

D-project has identified specific indicators and consequently disparities within the Danube NUTS 3 regions. It has showed big disparities between the middle and lo-

Project Team

wer Danube, between metropolitan agglomerations and rural regions. Stagnant and depressed regions represent mainly rural regions with weak accessibility, specifically across Danube, as a state border. The planning contribution to the overcoming of this problem was the challenge of Donauregionen+. Identification and mapping of the strategies of Danube regions (mainly NUTS3) proves big verity of their planning status, what leads to the formulation of the project strategy oriented to the development of the planning tool, which will be able not only to map the present situation concerning the existing strategies, but also to monitor their changes in time. D+ project has mapped the strategies at the level of Danube regions, proposed the Cross-Danube (mainly also cross-border) strategies with the objective to convert extensive settlement structures of mainly smaller centers into attractive polycentric Cross-Danube growth areas, respectively their linking with Danube metropolitan agglomerations in so called ARGE DONAU subregions.

Project objectives

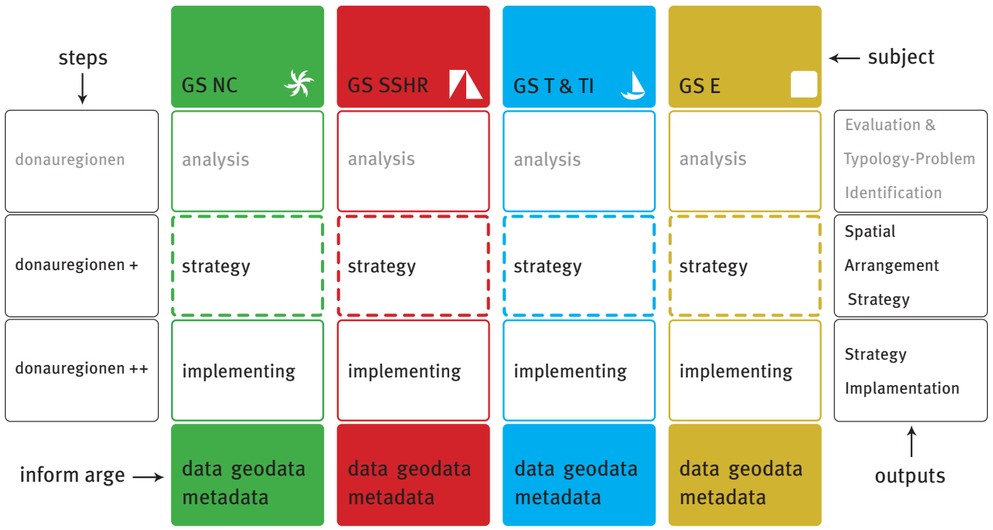
General objective of this phase of the ARGE WG SP concept was the description of the potential of the middle a lower part of the Danube and its importance for the Europe as important development corridor. The specific objective represents elaboration of the Joint Donauregionen Development Strategy (D+ Strategy), resp. mapping of existing development strategies in target area and their integration into the join planning information system . This requires common cooperation of planners of involved countries. The specific objective of the project was achieved through the combination of (1) bottom-up approach activities based on identification and evaluation of existing strategies of (1a) Danube NUTS3 regions, (1b) Cross-Danube regions 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.

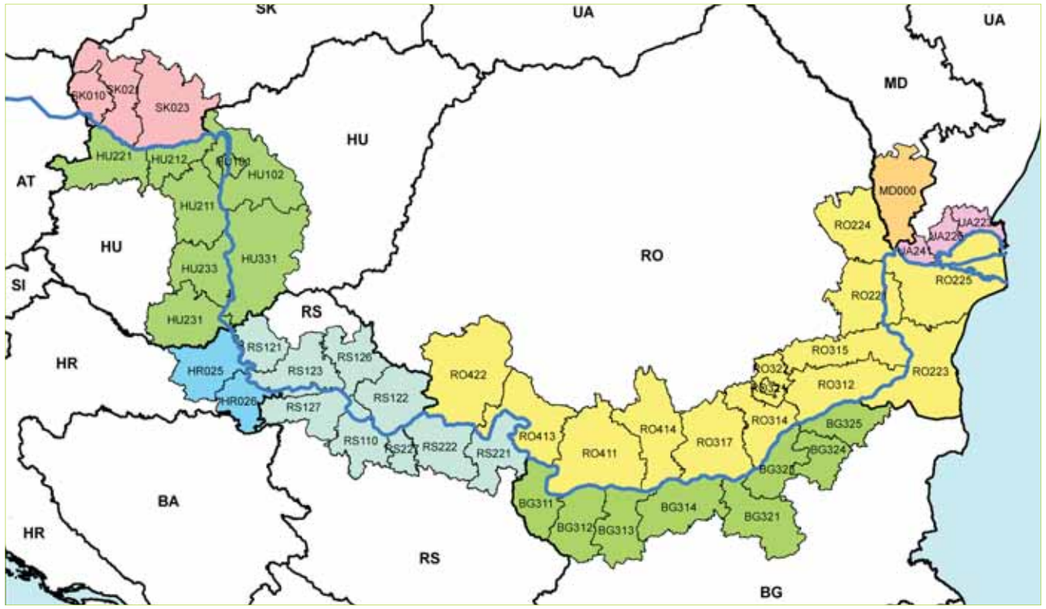
To achieve this, the D+ project has developed a D+ WEB portal with two planning servers (D+WEB server and D+-GIS server) in order to improve the communication between the planners in Danube region, specifically in the sectors of Natural Conditions, Settlement Structures & Human Resources, Transport & Technical Infrastructure and Economy, which represents the main result of the project.

Methodological approach

The project has updated the results of D-project, as it completed the analysis with multiannual approach in order to analyse the dynamics of individual indicators from the 1996 to 2008. Then the specific model technique has been adopted which enables to identify the impact of identified measures to the values of specific indicators in specific regions till 2020. It means the project is mapping development of specific indicators in specific regions from 1996 to 2020. On this basis it was possible to set up the SWOT analysis at all project levels and the strategies. The strategy consists of the sectoral strategies of Natural Conditions, Settlement Structures, Transport and Technical infrastructure and Economy where each of them consist of identified development factors, global and specific objectives, priorities and measures. The measures are divided into two groups, the 1st one consists of measures identified from existing documents and 2nd is proposed by the project experts. These strategies involve the strategies of all Danube regions, then strategies of so called CrossDanube regions (CDR), and their clusters - ARGE Subregions (AS) which were already identified in InterreglIIB project Donauregionen. CDRs strategies, as well as the strategies of ASs are representing an integration of local and regional strategies of relevant Danube regions. Important fact is that majority of CDRs and all ASs have crossborder, resp. trans-regional character.



This bottom up approach was done by identification of European and national planning influences. The strategies of two hierarchical levels were elaborated parallel in order to ensure mutual communication. The good experience of the Donauregionen project -splitting of responsibilities between partners remains in Donauregionen+ as well. This enables to utilize the experiences from D- project. The 1st task of the project was the elaboration of detailed methodology, verified at relevant territory of the SR. This 1st methodology was then implemented by individual coordinators of specific project activities and modified according to comments of involved partners, if necessary. Very important role has been given to mutual communication, where the key roles have had project workshops organized on quarterly basis. Very important was the communication via internet, where the project web portal has played the key role.



Transnational Approach

Area of interest of the project in comparison with the D-project was extended and includes the territories of all Danube countries except Austria and Germany. From each participated country there are partners, who represent state or regional planning institute, institution responsible for planning or professional planning association.

The most important transnational approach was the splitting of sectoral coordination between partners, as well as the coordination of the strategies for CDRs and ASs.

See map Area of interest - including 48 Danube regions (3 from Slovakia, 8 from Hungary, 2 from Croatia, 9 from Serbia, 14 from Romania, 8 form Bulgaria, 3 from Ukraine and 1 from Moldavia)

Project results and durability

Project has elaborated following outputs:

- Join project methodology including join terminology
- Organization of project workshops, meetings and conference - all reports are available on project web portal.
- D+ web portal, including D+WEB Server and D+ GIS Server as main tools for further development of Danube spatial planning information system
- Danube regions analysis, their typology and strategies
- Cross-Danube regions strategies and Strategies of ARGE Sub-regions
- Publicity outputs according CAP (project annual reports, project website, other publicity materials and documents)

Project represents the 1st systematic mapping of the planning strategies relevant to the Danube regions on regional, national and transregional levels available via internet for all project stakeholders as well as all other potential users.

Target groups

The basis target is group of ARGE Donaulander, which includes all Danube regions. Except this the special target groups of the project are Danube cities, Danube ports, Danube euro regions, planning institutions of Danube countries. All of these stakeholders represent planning bodies, for who the results of the project will provide the actual information about the conditions in relevant sector in Danube region, enable them to compare their situation with the rest of the Danube regions and give them the basic information about the strategies along the Danube. Project results will be interesting for the investors as well.

WP1: Transnational project management and coordination

Project administration

All works regarding administration of the whole project, coordination of individual project partners, financial management and preparation of necessary project documentation are very important parts of project implementation. During the project each project partner had to prepare partner reports for the individual project period. On the basis of these partner reports Lead Partner prepared and submitted Progress reports and Applications for Reimbursement to JTS.

In order to successfully coordinate and manage the implementation of the project activities, there is a need of meetings among project partners. There were realized many Controlling and Coordination Work Meetings between the Lead Partner and Project Partners throughout the project realization.

During the project also the Lead Partner's seminars were realized. The goals of these events were to present new implementation manual, discussion about the final part of the implementation period, comprising project closure and dissemination of results, as well as to inform about planning audit activities.

There was also need to sign three of addendums to subsidy contract for the implementation of the project. Addendum No. 2 resulted from decision of monitoring committee from 27th May 2011 to changes in Article 2 of subsidy contract. Addendum No. 3 was made because of changes in budgets of project partners ERDF PP1, ERDF PP5 and ERDF PP7. It was related to budget changes between the partners made on 17th May 2011.

Realization of workshops also contributed for smoothly coordination of the project. Due to the fact that they're organized regularly every 3 months, the implementation of project activities could be more fluent.

Terminology

As partners from 8 different countries with different terminology were participating in the project, the necessity of common special dictionary occured. Project terminology represents elaboration of comparative vocabulary of relevant planning terms of 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.

Whole project terminology is available on the project WEB server:

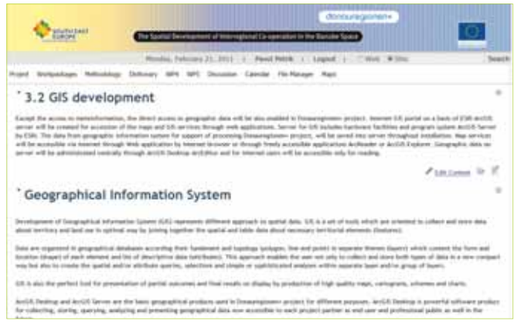
Figure 3: Dictionary form – each item on the left column has assigned definition, which is presented on the right side

Methodology

Project methodology is detailed description of works progress. The project follows the methodology of previous project Donauregionen. Methodology elaboration was one of the first task at the beginning of the project. In the year 2010 the approved methodology was further developed and modified according to actual demand by project partners. Methodology serves as a guide for elaboration of individual WPs and respective activities.

Project terminology is available on the project WEB server:

Figure 4: methodology form includes text file with a description of WPs



Partnership development

Very important part of partnership building was the creation of the Project Steering Committee (PSC). At least one participant from each country was a member of the committee. The D+ Project Steering Committee was responsible for the systematic control and decision making process of project activities and responsibilities of the project partners. It was composed of 9 members represented each participated country in the project, including Lead Partner. It was held on almost every project workshop together 11 times during the project.

The PSC meetings dealt mainly with questions regarding planned budget changes, discussion on the project modi-

fication request and administrative and managing activities including the deadlines of these works.

Workshops

There were realized 13 workshops of the project Donauregionen+ totally. Their aim was to present the current state of works in each workpackage, to discuss and solve various problems regarding project implementation.

Table 1: List of project workshops

1.	15th - 16th July 2009	Senec, Slovakia
2.	16th - 17th September 2009	Odessa, Ukraine
3.	9th - 10th December 2009	Osijek, Croatia
4.	16th -19th March 2010	Budapest, Hungary
5.	2nd – 3rd June 2010	Bucharest, Romania
6.	15th – 16th September 2010	Novi Sad, Serbia
7.	24th - 25th November 2010	Bratislava, Slovakia
8.	29th – 30th March 2011	Chisinau, Moldova
9.	1st – 2nd June 2011	Varna, Bulgaria
10.	21st – 22nd September 2011	Resita, Romania
11.	7th - 8th December 2011	Nitra, Slovakia
12.	15th – 16th February 2012	Dunajská Streda, Slovakia
13.	28th – 29th March 2012	Vukovar, Croatia

WP2: Communication and dissemination

Project web and logo development

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).

Figure 5: Project logo

An important tool of communication between project partners is the project website, which was established in year 2009 and during the project was updated 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.

Figure 6: WEB portal design

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

1. GIS server module which enables to present GIS data and support to elaboration of geographic analysis of involved partners, especially on Cross-Danube regions

Slovakia | Hungary
Bulgaria | Ukraine
Romania | Moldavia

Photos: National Conferences

and ARGE sub-regions.

2. Web server module with several submodules for information support of specific project WPs, namely:

- WP1 (terminology and methodology supporting modules)
- WP2 – support of CAP implementation
- WP3 (meta-information module – project database consists of relevant planning links: data-sources, bodies, institutions and planning documents and reports)
- WP4, WP5, WP6 and WP7 modules (data collection, comparative and clustering modules).

Publicity – Dissemination

The main publicity activities of D+ project were made through the project web portal: http://www.donauregionen.net, as well as by the individual web pages of all project partners, where they put relevant information about the implementation of DONAUREGIONEN+ project. There were printed Introductory report, Annual reports of the project in 2009, 2010 and in 2011, some map outputs and informative banners about DONAUREGIONEN+ project which were used for several public events, inter alia SEE Annual conferences, LP Seminars and some other conferences in project area.

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.

Public events

During the project there were various public events realized. Besides big international events such as SEE Annual conferences, the most important were the national conferences during year 2011 in all project partner countries. Their main goal was to present semi-results of the DONAUREGIONEN+ project relevant for country of the conference for key national experts, policy makers, practitioners as well as wide public. The benefits for participants were not only the overall awareness of the project, but particularly the possibility of discussion with project partners and also experts of the project. Longterm aim of the project in the future is the widest possible dissemination of the project results and to strengthen the partnership of institutions interested in spatial planning by meta-information system, web site and geographic information system (GIS) developed under the project.

Table 2: Dates of the national conferences

1.	23th February	Hungary
2.	31st March	Moldova
3.	29th April	Romania
4.	4th May	Croatia
5.	10th May	Serbia
6.	18th May	Slovakia
7.	25th May	Ukraine
8.	3rd June	Bulgaria

WP3: Project data and GIS development

Task of the workpackage activities during the project were:

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

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.

DonauDatenKatalog application come out from the official metadata system built in previous project Donauregionen. These metadata were analyzed and new database structure was proposed and tested during year 2011. The final development of the DonauDatenKatalog application was finished in the year 2012.

GIS Development

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 based on each of four General Schemes were partially changes because of layers count and density of features. Actually they are focused on:

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

Applications 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:

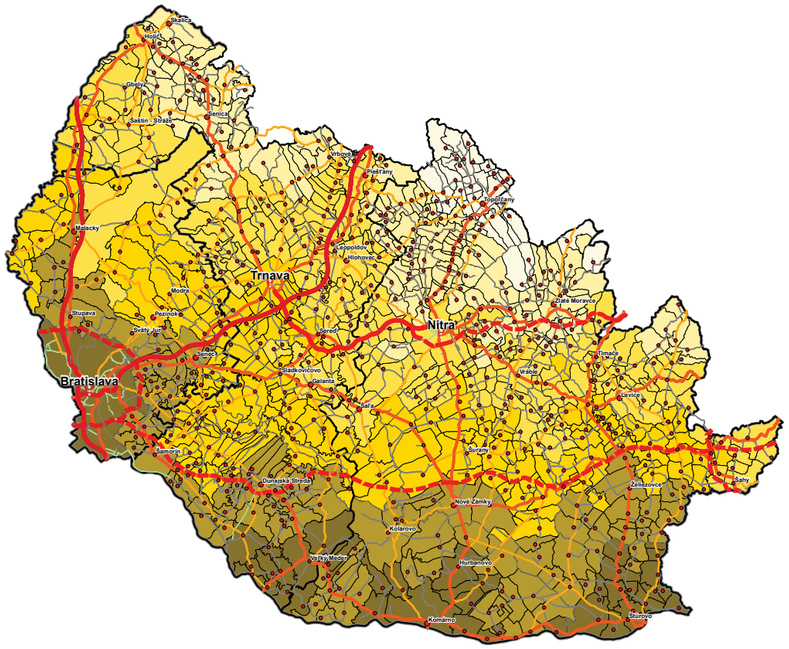
1. Nature Conditions: Nature Protection and Management
   a) Water Protection and Management
   b) Waste Management
   c) Air Management
   d) Geology
2. Settlement Structure & Human Resources: NUTS Regions
   a) LAU Units
3. Transport & Technical Infrastructure: Road Network
   a) Railway Network
   b) Waterways
   a) Bicycle Routes
   b) Airport
   c) Port
   d) Transport Facilities
   e) Electric Energy Network and Facilities
   f) Natural Gas Network and Facilities
   g) Oil Network and Facilities
   h) Water Supply Network and Facilities
   i) Sewage Network and Facilities
   j) Telecommunication Network and Facilities
4. Economy: Country Areas of Interest
   a) Cross Danube Regions and Core Areas
   b) Arge Donau Region and Subregions
5. Base data: Settlement
   a) Vegetation
   b) Rivers and Water Areas

Methodology and description of geodatabase structure 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.

Map 02: Example map of Slovak border crossing accessibility

As a basic data out the data from previous Donauregionen project were used. 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 were stored in shapefile format in two-dimensional geographical coordinates (longitude, latitude), decimal degrees with fraction. Finally elaborated data were 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.

Project portal

The development of Project portal represents the special part of WP3 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 forms
- Creation of WP5 forms
- Creation of WP6 forms
- Creation of WP7 forms
- Dynamic map representation of data outputs
- Linear Regression Calculation for indicators progress
- Indicator progress calculation according scenario including with / without cross border impacts
- Discuss forum
- Project calendar.

WP4: Analysis completion

Methodology

Work package 4 (WP4) represents analytical part of the project.

The objective of WP4 was to describe present state of natural, socio-economic and territorial conditions in the area of interest. Area of interest includes 48 Danube regions from 8 countries: Slovakia, Hungary, Croatia, Serbia, Romania, Bulgaria, Moldavia and Ukraine.

Within WP4, as well as all project are effects in 4 separately fields, general schemes (GS) are monitored and described: Natural Conditions, Settlement Structure & Human Resources, Transport & Technical Infrastructure and Economy. Part of WP4 is also Comprehensive evaluation of actual state of individual NUTS3 regions and Typology of regions.

Each GS consists of text (description) part, as well as GIS data. GIS data serve for graphic outputs creation.

Structure and brief methodology is as follows:

GS Natural Conditions

Basic issues

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 was 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, etc.

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

GS Settlement Structure & Human Resources

Basic issues

The objective was to specify the present status and trends of human resources development and settlement structures and their potential of international cooperation by the following:

- The characteristic of the human resources structure.
- The evaluation of the current situation and of the urban structures.
- The evaluation of the centers and settlement gravity centers.
- The identification of agglomerated systems.

GS Transport & Technical Infrastructure

Basic issues

Basic issue was to evaluate of the influence of transport on the process of rational distribution and to analyze the transport networks, their density and technical quality and contribution to further development.

Basic axis of the target territory is the river Danube, which is the main inner land waterway of international importance (E80) and the Multimodal transport corridor as well. Transport connections in the target territory are provided by routes of other kind of transport, specifically between the main transport nodes on the corridor No.VII (along river Danube) and the transport routes enabling the connection with neighborhood regions.

Transport potential of the Danube area

The transport area of the Danube area is assessed in this structure:

- highway and road transport
- railway transport
- air and water transport
- multimodal corridors and TEN network

Analysis of technical infrastructure systems potential

Evaluation of technical infrastructure is done in following structure:

- Electric energy supply and capacity
- Gas, oil supply and distribution
- Water management
- Alternative sources of energy supply
- Virtual technical infrastructure.

GS Economy

The aim of the general scheme Economy was the evaluation of the development potential of the regions in the Danube development corridor at the level of NUTS2 and NUTS3 regions on the grounds of the assessment of the existing conditions determined by the statistical data.

Evaluation of the economic level and development potential of the region

The evaluation of the economic level of the regions at the NUTS 2 and NUTS 3 level is based on the GDP indicator for the respective region in the period 1996 – 2008.

The Evaluation of the development economic potential of the region consists of:

- primary resources (natural potential)
- secondary resources (potential created by human activity)

Comprehensive evaluation and typology of the regions

This section consists of comprehensive evaluation of Natural, Socioeconomics, Residential and territorial conditions for regions within DONAUREGIONEN area on NUTS 3 level.

First and the basic step was the selection of indicators for summary evaluation according to each separate General Scheme. Next step, based on the selected indicators, was to express the position of each NUTS3 region for every indicator and in summary.

Each region's position was expressed by score (points). The score has set up the position of individual region in comparison with region which reached the best values within area of interest. This way we got the ranking of regions for every indicator. Afterward we counted up points of every individual region (for individual indicators) and we got the final score which defined summary ranking of individual regions within examined area.

On the basis of defined procedure we were able to:

- Identify the problem regions
- Define complex of comparative advantages or disadvantages of individual NUTS3 regions by individual GS
- Outline the possibilities of interregional relations for more effective utilization of disposable advantages or for limitation of negative results of insufficient conditions for development.

According to working process mentioned above we acquired summary results for each separate General Scheme as well as for whole DONAUREGIONEN region. Afterward we ranked each region within DONAUREGIONEN part for each indicator, General Scheme and at the end for whole DONAUREGIONEN part.

According to the result four types of regions were identified:

- Developed regions
- Stabilized regions
- Stagnating regions
- Depressed regions

Example of Analysis of Nitra county

Natural conditions

Land use

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).

Table 3: Data of Land use

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

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)

Map 03: NATURA 2000 map

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.

Water pollution

EU legislation solves the problems of protection of the sustainable water exploitation by way of Water frame directive (WFD). By means of this directive the way of water monitoring, assessment and management has been significantly changed in the most of European countries.

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.

(see table 4 on pg. 15)

Table 4: 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.

Settlement Structure

General information

Population of Nitra Self-governing region is 707 305 inhabitants (31st of December 2006). The total number of inhabitants in the period of 2001 – 2006 decreased by 1%. The total population decrease was therefore 5 007 inhabitants.

The share of population in pre productive age was low (15%) in 2005 and there is a tendency of further decrease. Another proof of population ageing is increasing ageing index, which increased to 141, 24 (2005) from 117, 18 (2001). This situation is unfavourable in terms of future development of the region.

Evolution of the settlement

Whole settlement structure is situated at lowland and modest upland, with dominant agriculture. The particular settlements are spatially distributed evenly, with one bigger central settlement (city of Nitra). The even spatial distribution of settlements is disrupted only by line settlement structure along the rivers. This basis of settlement, determined by the natural conditions was further developed by the civilization conditions – strong influence of the agriculture, transport routes (road and railway) and continual industrialization of the region.

Settlement characteristics

The main settlement pole of the region is Nitra. This settlement pole is of supra regional and nationwide relevance. Other poles of the region are the seats of the counties, the towns of Komárno, Levice, Nové Zámky, Šaľa, Topoľčany and Zlaté Moravce. Also Šurany, Štúrovo, Kolárovo, Šahy, Želiezovce are important towns of the settlement structure.

Development trends

The territory of the region is in terms of settlement evolution one of the most important historical areas of the Slovak Republic.

Current state of settlement structure is a result of the effects of natural as well as civilization conditions. The settlement is spread across the lowland and modest upland, with dominant agriculture. The particular settlements are distributed evenly around core settlement centres. This even character of the settlement structure is disrupted only by linear settlement structure along the rivers. The basic conditions for settlement structure development determined by the natural conditions were affected by civilization conditions – mainly agriculture, development of transport infrastructure (roads and railways) and industrialization.

Roles of importance of the towns

Accessibility of all region's municipalities from Nitra by road is adequate. The distance of all municipalities from Nitra is less than 100 km – approximately 1,5 hour of driving.

All the municipalities of the region are connected to highway or expressway. The best accesibility to highway is from Nitra city, towns within 60 km distance are Šaľa and Topoľčany. The distance of the other towns to highway is more than 80 km. The shortest distance to expressway is from Nitra, Zlaté Moravce, Vráble and Šurany. The distance of other towns is 30 km and more.

The access points to Hungary are in Komárno, Štúrovo and Šahy.

Agglomerations areas and development axes

The settlement development axis raised on a basis of historical corridors along water courses. The development axes are defined by the Slovak Spatial Development Perspective 2001.

The first stage development axis connects the first group settlement centres with the first level settlement core areas in the country and comparable centres outside state borders. It includes at least one road communication link and one speed railway communication link.

The second stage development axis connects the second group settlement centres and second level settlement core areas with the first group settlement centres and the first level settlement core areas, including at least one road communication link and one railway communication link of supra-regional importance, or one highway.

Human Resources

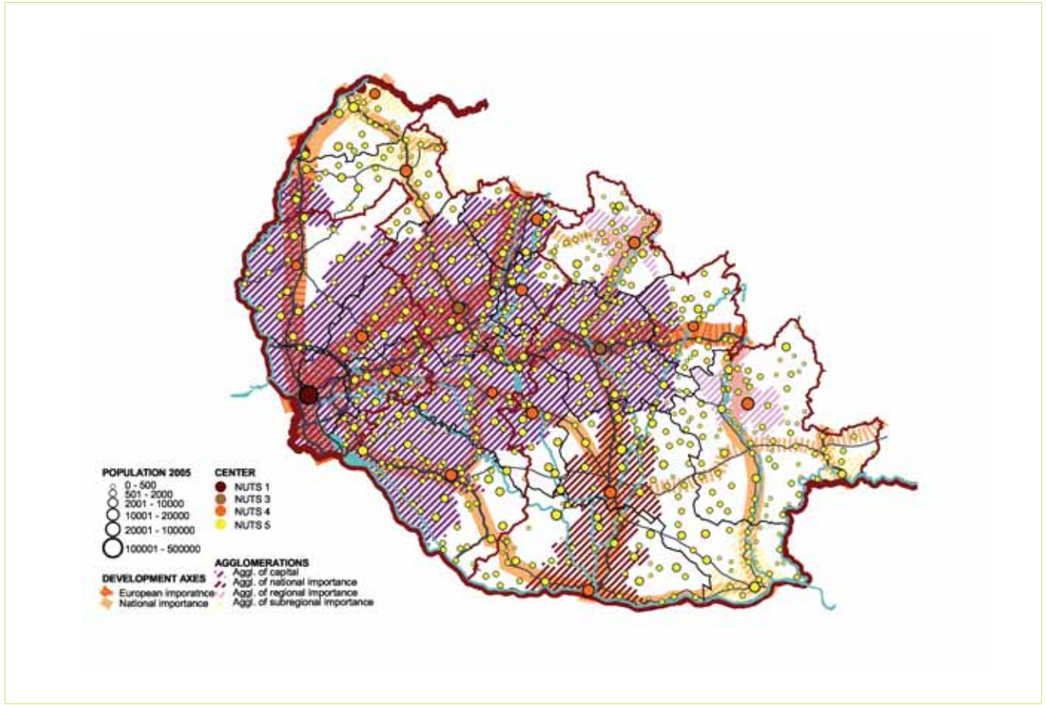
Demographic situation

Significant changes in the evolution of the structure of demography which are reflection of economic and social situation of the region have been remarked. The long term tendencies are: deceleration of the population reproduction, decrease of natural increase of population (which was -1992 in 2007). The marriage and divorce rates are decreasing. The process of population ageing is continuing. The average age in the region was 39, 04 and the ageing index was 148, 33 in 2006.

Educational structure

Educational structure of the adult population of Nitra Self-governing region is average (in terms of Slovakia) with significant share of inhabitants with only elementary education or without education degree (31%). The share of inhabitants with university degree is 8%. In comparison with average figures of the Slovak republic, the region is worse mainly in share of inhabitants with secondary school and university education. (see Map 3 below)

Map 05: Agglomeration areas and development axes in the project region



Transport

General information

Considering the linear character, the issue of Pan-European wide transportation networks cannot be divided into description of spatial structures at regional level. Therefore, following section describes pan-European multimodal ITF corridors on the Slovak part of the DONAUREGIONEN area:

- multimodal corridor No. IV. (Berlin/Nuremberg - Prague) national border Slovakia/Czech Republic - Kúty - Bratislava/Rusovce - national border Slovakia/Hungary located for road infrastructure (D2 motorway in Slovakia) and

Kúty - Bratislava - Štúrovo - national border Slovakia/Hungary located for railway (Slovakia railway lines No. 110, 111, 130 and 132) infrastructure (Budapest - Romania/Turkey/Greece)

- multimodal corridor No. V. branch Va. (Austria) - Bratislava/Jarovce - Žilina - Košice - Záhor/Čierna nad Tisou - (Uzhgorod - Lvov), located for road (D1 motorway in Slovakia) and railway (in southwestern Slovakia conventional line No. 120) infrastructure
- multimodal corridor No. VII. Danube waterway.

Road Network

The main North-South oriented road of the region is the road I/64, creating a communication axis Ponitrie. In 2008, road R8 Nitra - Topoľčany - R2 crossroad, located in the northern part of the territory of Nitra, was integrated into the network of Slovak expressways. In the broader international context, the southern part of the road I/64, ending with the border crossing with Hungary, has higher importance than the northern part of the road. Road connection I/64 in the section of Nitra (R1) - Nové Zámky - Komárno - Komárom (Hungarian motorway M1) has a high potential for international traffic. Also, road I/76 has North-South direction, linking R1 expressway corridor with the southern part of county and city Štúrovo. Regional II. and III. class roads, which are locally supplemented by I. class routes, create a communication infrastructure network with good transport accessibility.

Places designated for border crossing with neighbouring Schengen area countries – Hungary only - are located in Komarno, Štúrovo, Salka and Šahy. The passage in Komárno is located on route I/64 Komárno – Komárom, in Štúrovo it is route I/63 Štúrovo – Estergom, in Šahy it is route I/66 Šahy - Parassapuszta. Passage Salka - Letkés is located on road III/510006.

Railway Network

The main railway line in Nitra Region is line No. 130 (C-E52), Bratislava - Galanta - Nové Zámky - Štúrovo - national border Slovakia/Hungary. Railway line No. 135 (C-E61) Nové Zámky - Komárno - national border Slovakia/Hungary is included in the complementary network interconnecting corridor railway lines. In Palárikovo, the railway line No. 130 (C-E52) is connected to railway No. 150 Nové Zámky - Zvolen which is part of complementary excluding-corridor railway network. Mentioned lines are included in the category of international importance.

Places designated for border crossing with neighbouring Schengen area countries - Komárno - Komárom and Štúrovo - Szob at the state border with Hungary.

Waterways and Ports

Danube water road is in region territory situated in channel axis route of river basin. Danube - Palkovičovo – Gönyü water roads' sections, located in Nitra, Trnava region and Čenkov in Nitra region are included into complicated sections of nautic. Nautic's future through mentioned sections of Danube is unclear. As a reason of unrealized construction of water scheme Nagymáros is nautics through mentioned sections provided by classic modification of river basin, which are in long term perspective unmaintainable.

Multimodal Transport System and Terminals

AGC railways dedicated for combined transport operations within region are, based on AGTC agreement described in railway devoted part, marked as C-E together with numerical symbol. Water road Danube and water road Váh are water roads of AGC assigned for combine transport operation AGTC.

There is not terminal of combined transport operating in Nitra region territory. Combined transport services are provided through terminals in Bratislava and Trnava region. Container transship point RoLa in Nové Zámky has been closed. The AGTC agreement considers creation of combined transport terminal water/railway in Váh port Šaľa.

Technical Infrastructure

Electric Energy Networks and Installations

Nuclear power plant Mochovce, located in the north-east of the region, is the main source of electric energy of supra-regional relevance and belongs to the core section of electricity supply system of the Slovak Republic. Two units are in operation since 1998 and 2000; each with 470 MW installed capacity. Remaining two units are now being built; 3rd unit is planned to be put into commercial operation in 2012, 4th unit year after, increasing the total installed capacity up to 1880 MW.

Regional power sources:

- Nuclear Power plant Mochovce (2x470 MW)
- Combined Cycle Power Plant Levice (82 MW)
- Hydroelectric Power plant Kráľová (45 MW)

Gas and Oil Supply and Distribution

Through the region, by east-west direction passes transit gas pipeline, which provides a transit of gas from Ukraine to European market. Volume of the transported gas is 20 % of total EU consumption. Also one of the four compressor plants of transit gas pipeline is located in the region (Ivanka pri Nitre).

The current situation in connection of the settlements and supplying of the gas is satisfactory. The share of settlements connected to the gas pipeline system varies from 74.6 % in Levice district to 100 % in Nitra, Šaľa, Topoľčany and Zlaté Moravce districts.

Telecommunication Network

Within a framework of telecommunication network modernisation, progressive extension of access network and modernisation of cable lines are planned. Implementation of FITL (optical components in the network) technology is planned in the future.The access to the telecommunications network infrastructure is satisfactory in the whole region. Local low accessibility of rural areas results in partial broadband unavailability, but generally the Nitra Region is provided by telecommunications services of desired scope and range.

Economy

General information

Regional Gross Domestic Product in purchasing power parity during the monitoring period showed a positive significant increase by 60,7% (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 number of economic active population was recorded slightly increase. In 2008 it was reported 360,5 thousand economic active population which was increase by 4,1% 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.

Economic level

Gross Domestic Product

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 year 2007. During the period it was recorded positive trend. Regional GDP in purchasing power parity per capita was increase from 8781,7 to 14108,2 (increase by 60,7%). The indicator reached 56,6% of GDP EU-27 (in PPS).

Activity Structure

The best expression of the activity structure is 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.

The Gross added value during monitored period reported by 2,74 times. In 2007 it was 10,97% of the Slovak Republic. The highest share of gross value added in 2007, reached the sector of industry (21,4%), electricity, gas and water supply (17,6%) and wholesale and retail trade (16,9). The main increase was reported in sector wholesale and retail trade and electricity, gas and water supply. The sectors with low gross added value in 2007 (under 2% of gross added value in region) we can include in particular: mining and quarrying, hotels and restaurants and financial intermediation.

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 Nitra was (2008) 690,23 EUR, which is the third lowest value in comparison with other regions in the Slovak Republic. The increase of wages between 2005 and 2008 was 30, 31%, which is over the average increase of the Slovak Republic (25,85%).

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 70,06 (men) and 78, 28 (women). Despite of positive trend of this indicator of region it was under average of the Slovak republic (70,85 – men, 78,73 – women). The region of Nitra achieved the third place in comparison with the rest of region in the Slovak Republic.

Economic Potential

Primary Resources

Region Nitra manages the largest agricultural land area of all regions of Slovakia. The agricultural land area takes 73% of the region in total especially arable land (87% of agricultural land area). The region is one of the leading producers of agricultural crops such as wheat, barley, corn, peas, sugar, tobacco, sunflower seeds and it he largest producer of cereals, sugar beet and grapes. Animal production is focused on rearing of poultry and pigs.

Secondary Resources

During the monitoring period number of economically active population reported positive trend. The number of economically active population in 2008 reached 360,5 thousand of which employed labour force 91,2%. The economic activity rate (calculated as share of economically active population on population in total over 15 inhabitants) in the district was in amount 59,5%.

The unemployment rate indicator in the region reported decrease from 23,1 (2001) to 8,8% (2008). In 2008 employees worked mainly in the sectors of industry (30,5%), wholesale and retail trade (18,23%) and construction (7,43%). The structure of industries in the region is varied. The core industries of the region are food, chemical, electrical, mechanical engineering, paper and leader industries.

Comprehensive evaluation and typology of regions

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.

Inputs specification

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 must reflect the key factors that affect the conditions
- selected phenomenon must be expressed in quantitative indicator
- indicator are expressed in units agreed in the General Scheme
- indicators are processed for the years 1996, 2001, 2005 and 2008 (eventually 2007).

Outputs 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
- stabilized regions
- stagnant regions
- depressed regions.

Mentioned typology serves as 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.

WP5: Sectoral strategies development

Methodology

Main objective of workpackage 5 was the identification and specification of strategic objectives, priorities and mapping of the key development and strategic documents of all NUTS3 regions within the area of interest. Works were, according to the project logic, divided into four general schemes: natural conditions, settlement structure and human resources, transport and technical infrastructure, economy.

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

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

Outputs

WP5 outputs are:

- SWOT analysis of Danube regions
- Sectoral strategies of Danube regions

Map outputs:

- Natural conditions map
- Spatial structure map
- Transport and technical infrastructure map
- Cartograms and cartodiagrams describing main socio-economic features.

Example of Strategy of Nitra county

Natural conditions

Global objective: Comfortable environment with focus on sustainable growth

Specific objective 1: Effective system of water management and quality environment

Priority 1.1: Water management

Reasoning

Availability and quality of water is one of the defining conditions for the development of the region. Economic activity of the region, as well as the level of people's lives depends on the availability and quality of water. The principle of water management policy is therefore a comprehensive conservation and use of water wealth. Water or water management quality in territory is very difficult to determine. It is possible to use the value from measuring stations to monitor water quality. These figures show a slight improvement of water quality of river network in the Nitra region since 2001. This is the result of legislative changes and the introduction of newer technologies in the field of water management. In the term of 2020, by implementing all the proposed measures is supposed further purification of water.

Description:

The aim of the priority is to develop appropriate legislative and technical conditions for improving the quality of groundwater and surface water and to take measures for the gradual reduction of water pollution in the region.

Relations and connections

Water quality interacts itself in individual regions. Tributaries of the Danube pass administrative borders of several counties. Pollution of water flow from the sources of water pollution in the upper stream is spread to other parts of the territory. Water quality in 2020 in the Nitra region may be also affected by the region outside the Donauregionen + territory. Thus, active impact on water regime may be more and hardly can be expected. If the measures are complied with, the quality of water in the Nitra region will gradually improve. In the prognoses, however, are not yet reflected negatively or positively impacts of other regions.

List of Measures:

- building new water systems and improving technical parameters of existing ones
- legislative treatment on discharge of warmed and significantly mineralized water from geothermal water parks
- synchronize wastewater discharge out of existing sewage with legislative acts
- survey and monitoring of priority environmental burdens
- monitoring of pesticides in groundwater

Priority 1.2: State of the environment

Reasoning

Nitra county is one of the environmentally less burdened regions. Air quality of Nitra county is influenced mainly by emissions from large industrial sources located in the region. Main polluter is the chemical industry. Since 1996 significant decrease of emissions in the region is recorded. This trend is observed due to legislative and technological measures to air protect, as well as stagnant industrial activity.

Description:

Aim of the priority is to ensure better protection of individual environmental components through building and modernizing of facilities of environmental infrastructure. Development of separated communal waste collection and ecological waste disposal. Realization of activities aimed to increasing of air quality. Support of increasing inhabitants awareness on environment. Realization of activities decreasing old environmental burdens.

Relations and connections

In terms of air pollution external influences on the region are important. Pollutants spread from other regions, not only from neighbors but also the nearby regions. Transport is an important factor influencing air pollution. Respecting the proposed measures provide crucial reduction of pollutants. Transport measures negatively affect this value. It will be difficult to determine links with other regions and to determine their level of influence of the region.

List of Measures:

- education and raising environmental awareness
- intensified cleaning and watering communications
- plant greenery in urban areas
- regular monitoring, service and early troubleshooting of technological equipment
- prevent heating with solid fuels

WP6: Crossdanube strategy development

Methodology

Objective

The general objective of Workpackage 6 (WP6) was elaboration of development strategies for 19 Cross-Danube regions, defined in (previous) project DONAUREGIONEN extended also to the territory of new partners regions in Croatia, Moldovia and Ukraine. The strategies have been created on the basis of identification and evaluation of the local strategies of bigger Danube centres and ports, Danube regions, Danube Euroregions and other important Danube stakeholders. For the project purposes "Strategies development" represents mapping of existing strategies and planned key development projects identified in different types of documents (structural and regional policy documents, physical planning documents, social economic development programs, strategies of cross border cooperation etc.) at national, regional, cross border and local level related to particular CDR.

Tasks

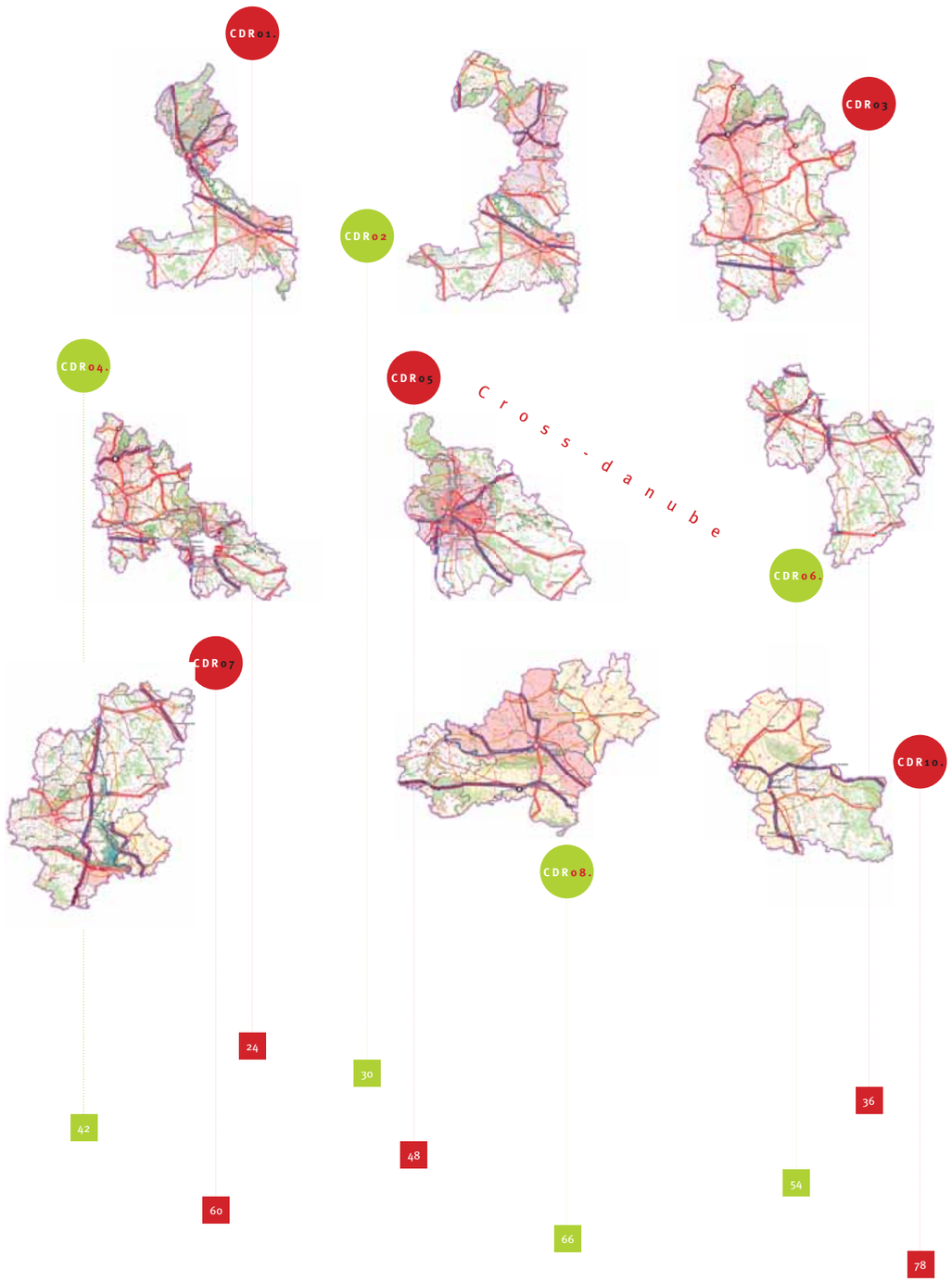
For successful realization of general objective the regional partnerships of all Cross-Danube Regions have been set up. For the development of Cross-Danube strategies there were several "Cross-Danube-Strategy-Workshops" (CDSW) between the relevant partners from the specific ARGE subregion realized during the project.

WP6 is closely associated with WP4 and WP5. The outputs of WP4 served for elaboration of the analytical description of current situation of the CDR. The outputs of WP5 served as a basis for Cross-Danube Strategies elaboration.

Outputs of WP6

The final result of WP6 was elaboration of 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
- Description of current situation within four general schemes
- SWOT analysis
- Identification of relevant stakeholders within CDR
- Identification of relevant planning and strategic documents and existing problems
- Strategy summary in structure of: objectives, priorities and measures(summary description in this final report presents the most important issues including: identification of the CDR area; SWOT analysis and strategy summary. For more information see D+ web server chapter WP6)
- Map outputs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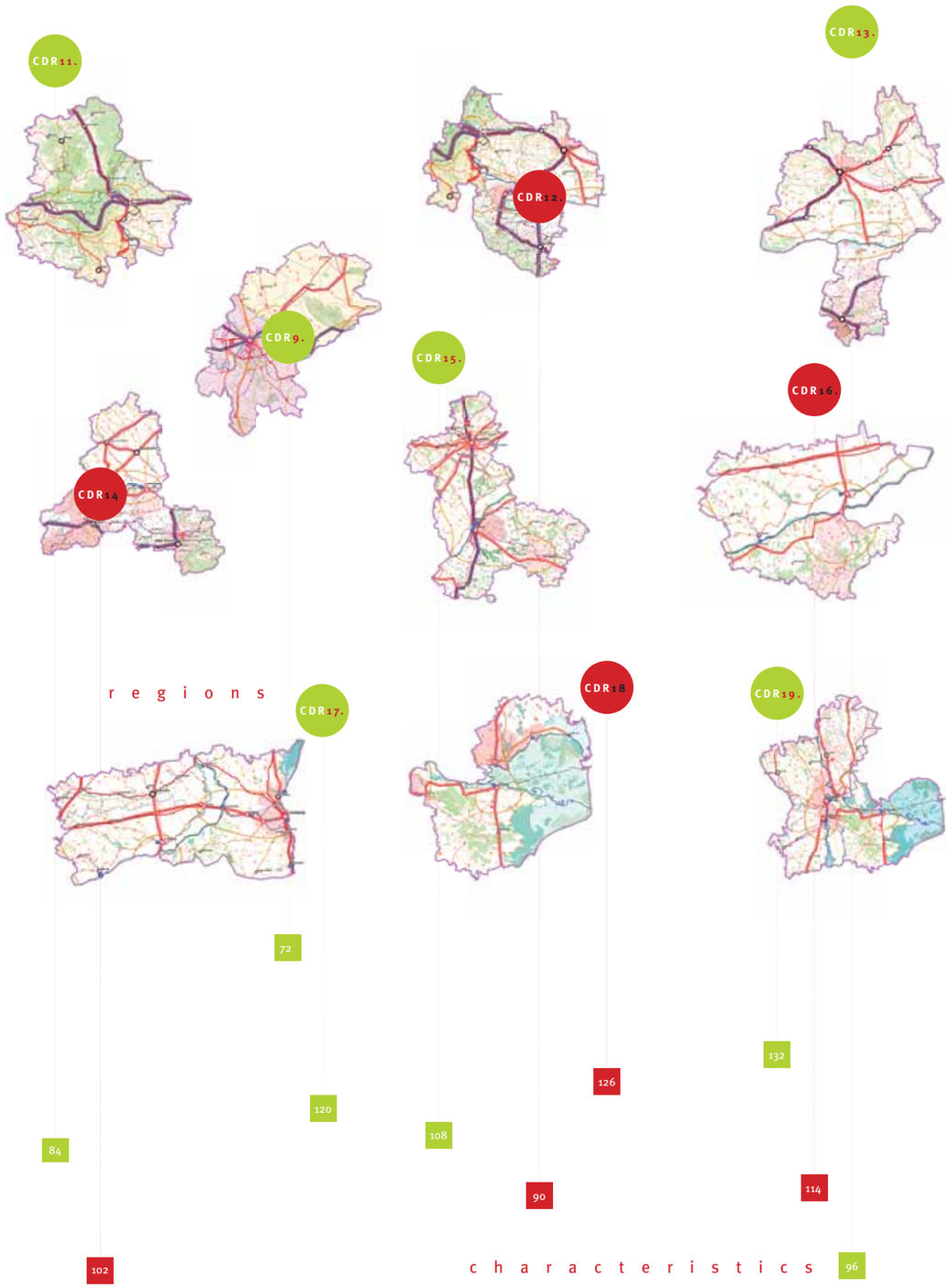
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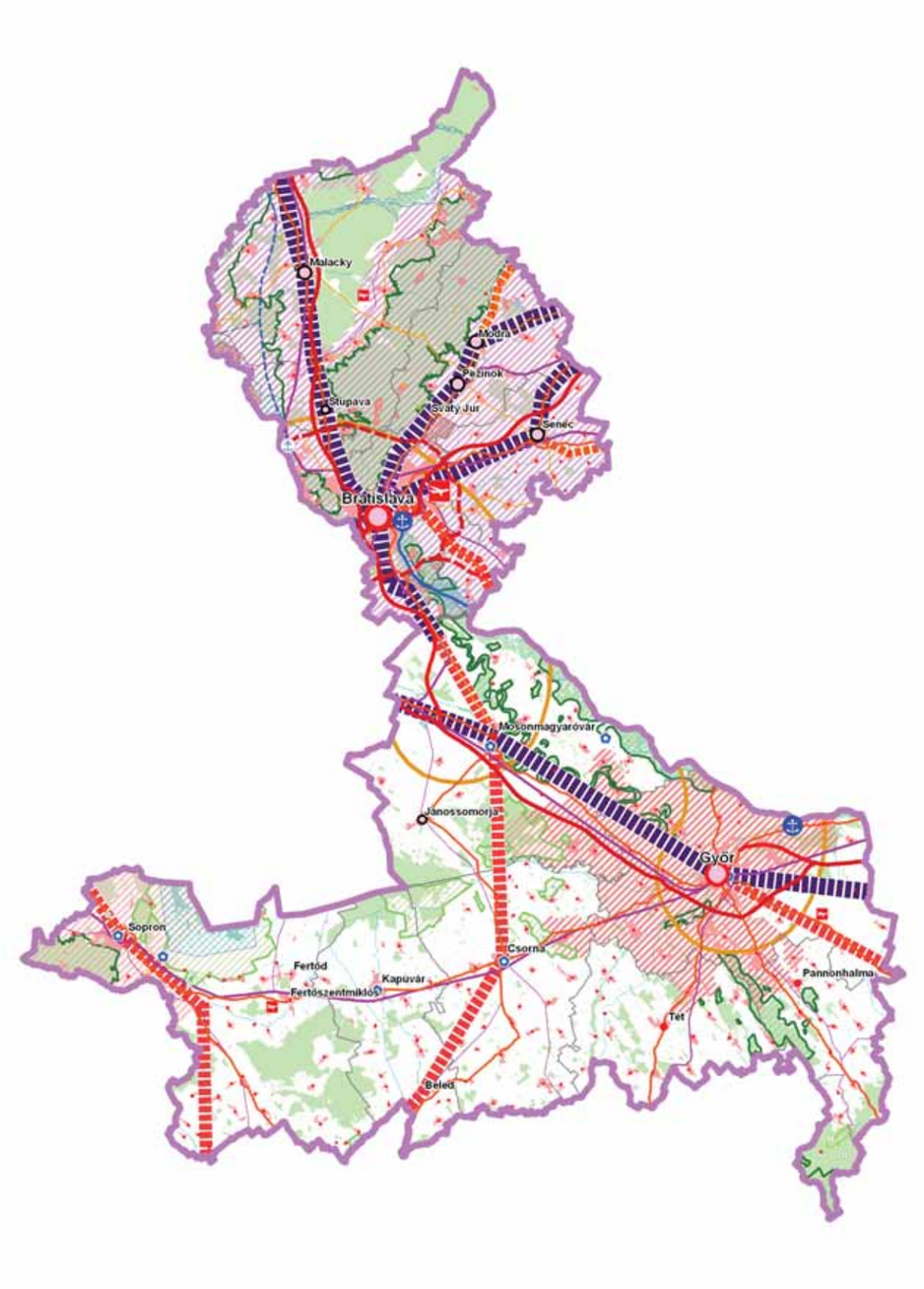
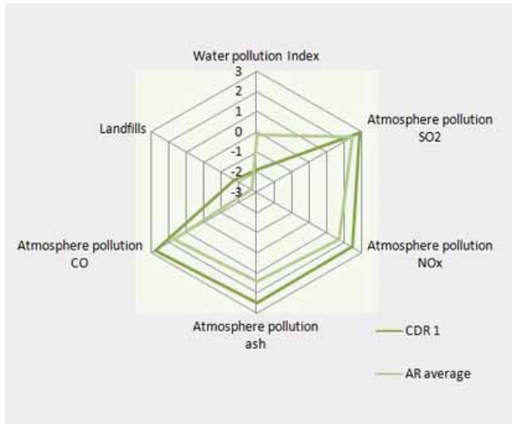


SWOT analysis

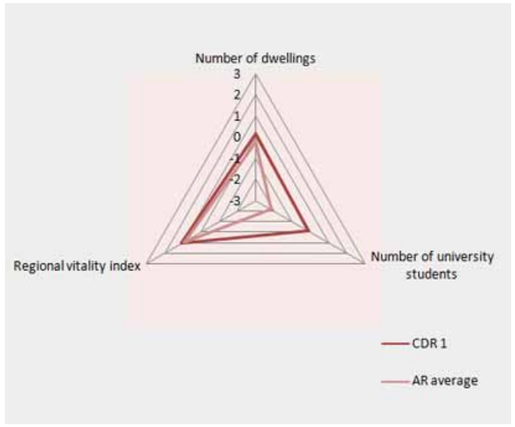
GS	Strengths	Weaknesses
NC	High share of declared protected areas (all categories) Relatively high number of water sources with sufficient yield Modern approaches to energetic utilization of wastes and separation Rich in natural forest types in the mountains	Air pollution from transportation, economy and construction activity Increased demand of nature sources utilization (water, mineral sources.) Significant share of danger waste considering small county measurement Low rate of forests
SSHR	Equally distribution of settlement centers with job opportunities development in the region Organized waste management system	Increasing share of aged population Lack of developed regional transportation High number of commuters Increasing of crime
TTI	Crossing of international multimodal corridors, Constructed motorways D1 and D2, Airport of international importance, Functional intermodal terminals and port, Developed cycle facilities and cycle roads in Szigetkoz	Low level of accessibility of the area along the Danube on the radial road and rail Insufficient RES production, Lack of technical infrastructure (lack of sewage treatment plants, lack of facilities for waste treatment) Insufficient public transport system
E	Multi-sectional structure of industry especially in market services – tertiary branch Highly educated population concentrated in the Bratislava region Low unemployment rate Foreign investors Good touristic facilities	R&D potential is not sufficiently used for more demanding economic (insufficient support of R&D) Demography stagnation Lack of qualified labour force in certain sectors Missing of capital for SMEs, agricultural sector
GS	Opportunities	Threats
NC	Important wine region Higher and broader protection of natural areas (Szigetköz) Environmentally friendly soil use (significant role in surface water protection) Establishing danube natural parks	High level of built-up areas Illegal landfills in the area Areas affected by soil erosion and landslides The underground water will be polluted Non appropriate protection of the underground drinking water base at Szigetköz
SSHR	Utilization of universities and research institutions as a science-research potential Development of lifelong education Education within tourist and catering sector, Strenghtening of local development organizations	Unfavourable reproduction characteristics Outflow of skilled workforce abroad Aging in small settlements Officially illegal working for foreign investor Decline of traditional lifestyle (village)
TTI	Modernisation of the remaining corridor conventional railways No. 110, 130 and 131 Motorway D4 and expressway R7 construction Realization of Bratislava integrated transport system Wide range of RES potential	Different accessibility of sewage treatment systems in town and rural areas, Natural Gas and Crude Oil import Limited investment opportunities of self-government counties for maintaining and developing transport infrastructure under their management (roads of II. and III. class)
E	Increase cooperation between existing R&D base (R&D institutions, universities and industry) Increasing cooperation between the economic centres located in neighbouring regions Use of cultural heritage and traditional values Development of health services	Increase and outflow of skilled labour force abroad Increasing traffic jams around big cities Decreasing number of possibilitie for inverstment because of agricultural scissors Cummulating environmental dangers in Danube flood area

The CDR No.1 Bratislava – Mosonmagyaróvar consists of two NUTS3 regions (Bratislava county and Győr-Moson-Sopron county). Total area is 6 261 km².

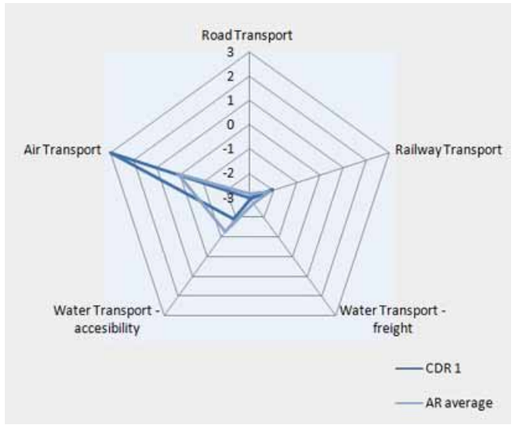
Graph 1



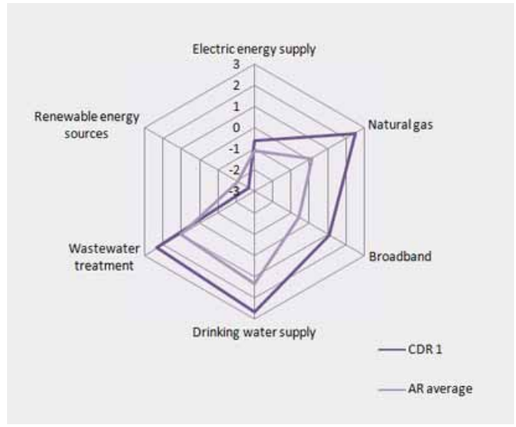
Graph 2



Graph 3



Graph 4



CDR Strategy

General Scheme: Natural Conditions

Global objective: Quality environment

SO 1: Clean water

P 1.1: Water management and wastewater utility development

M: building new water systems and improving technical parameters of existing ones, synchronize wastewater discharge out of existing sewage with acts legislative, survey and monitoring of priority environmental burdens, monitoring of pesticides in groundwater,

SO 2: Waste management in line with EU requirements

P 2.1: State of the environment

M: ensure the recultivation of insufficient landfills and old environmental burdens; adopt separated collection of biologically decomposable wastes in Bratislava; use of inert waste stored in landfills within building industry; increase the material recovery of construction waste;

P 2.2: Increase energy efficiency and alternative energy sources

M: promoting environmental thinking method;using alternative energy sources to help regulatory environment forming; encourage the sustainable use of wind energy, biomass, hydropower;

SO 3: Reduction of air pollution

P 3.1: Air pollution

M: Bus transport replaced with tram transport, gasification of buses, Tighten up of general emission limits for new large and medium air pollution sources.

P 3.2: Programming in the field of environment protection

M: create conditions in the local physical plan and Economy and Social Development Programme for central heating with the use of renewable energy sources,

Graph 1: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Sustainable social and even spatial development in the Komárom-Komárno CDR

SO 3: Building knowledge based economy

P 3.1: Adapting the content of education to the needs of labour market

M: Elementary education and the needs of the 21st century, Better technician-training on secondary level, Adequate higher education development (e. g.: in engineering and renewable energy production, pedagogy, etc.), Retraining of unemployed people, Cross-border approve of certificates

SO 4: Strenghtening internal cohesion of the region

P 4.1: Education and regional and local identity development

M: Foreign language education, Strenghtening regional identity in education, Cross-border get-together programmes, Common history – common future programmes

SO 5: Sustainable regional society

P 5.1: Equal chances for all settlements

M: Strenghtening local primary education, Knowledge for local industry and services (3L program), Minority for majority (language and cultural programmes), Cross-border partner programs for settlements (twin-settlement programs)

P 5.2: Development of local social security

M: Labor programs for the poor and unemployed, Inclusion of newcommers (integration of immigrants), Local programmes for the old

Graph 2: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Functional transport infrastructure and Effective, innovative and environment-friendly technical infrastructure

SO 5: Transport

P 5.1: Road Network

M: construction and operation of the motorway D4 in the position of zero radius of Bratislava; construction and operation of the expressway R7 Bratislava – Dunajská Streda – Nové Zámky – Lučenec;

P 5.2: Railway Network

M: Modernization of railway line No.120 Bratislava – Pezinok – Žilina, Modernization of railway line No.110 Bratislava - Malacky – Kúty – national border SK/CZ,

P 5.3: Air Transport

M: Development of technical base at the airport M. R. Stefanik in Bratislava.

P 5.4: Waterways and Ports

M: Implementation of a European priority project No. 18 in Vienna – Bratislava section, Development of technical base and Bratislava port services; Integration of passenger shipping into the system of public transportation; Passenger ships' and jacht ports.

P 5.5: Multimodal Transportation System and Terminals

M: Construction of public TIP Bratislava; Bratislava Integrated Transport System - Construction of an integrated passenger transport terminal and parkings Park & Ride; Bratislava Integrated Transport System Establishment of multimodal public transport,

SO 6: Efficient energy, decreased dependency and increased use of renewable energy sources

Graph 3: T indicators status in 2020

P 6.1: Efficient Electric Energy Sources

M: Using alternative energy sources; Measures aimed at increasing energy efficiency; Increase electricity production from RES (encourage the sustainable use of wind energy, biomass and hydropower);

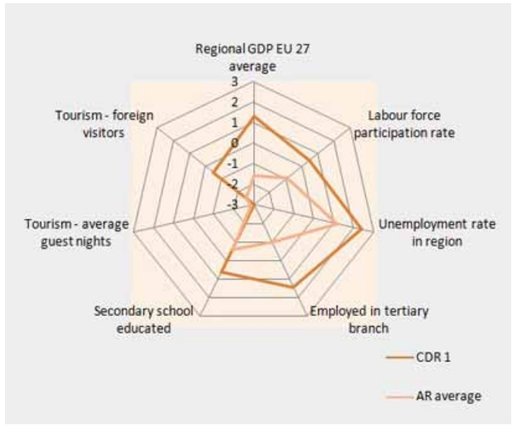
P 6.2: Electric Energy Networks and Installations

M: Increased supply security; New power line (2x110 kV) Stupava – Senica, New transmission line (2x400 kV) Stupava – Wien or Bratislava – Wien, Transmission lines reconstruction (400 kV)

P 6.3: Natural Gas Supply

M: Completion of natural gas network in Senec district, Upgrade of underground natural gas storage Láb, New underground natural gas storage Gajary-Baden.

Graph 5



SO 7: Development of Information Society

P 7.1: Telecommunications Network and Digital literacy development

M: High speed networks innovation; Support of wider broadband access especially in rural parts of region

SO 8: Development of drinking water supply and waste water systems

P 8.1: Water Supply development, Development of water supply networks (Malokarpatská agglomeration); Water supply systems interconnections: Šamorín – Záhorie, Dúbrava – Rohožník – Plavecký Mikuláš,Pezinok Grinava

P 8.2: Wastewater treatment development

M Supporting wastewater treatment technologies, Wastewater collection and treatment systems of agglomerations: Malacky, Senec, Malokarpatská agglomeration

Graph 4: TI indicators status in 2020

General Scheme: Economy

Global objective: Competitive economy with focus on high level of employment rate and developed industrial – touristic region

SO 9: Knowledge based economy

P 9.1: Economic potential

M: Promote networking between research institutes; Promoting entrepreneurship and self-employment of unemployed; Development of transport (air, road, railway, water and combined); Reduce emigration of highly qualified workers to abroad; Creating the conditions for innovation;

SO 10: Creating the appropriate environment to encourage the development of employment

P 10.1: Business environment

M: Promoting entrepreneurship and self-employment of unemployed; Forms of tourism development; Support for the modernization of agricultural production; Development of a competitive industrial base;

P 10.2: International cooperation

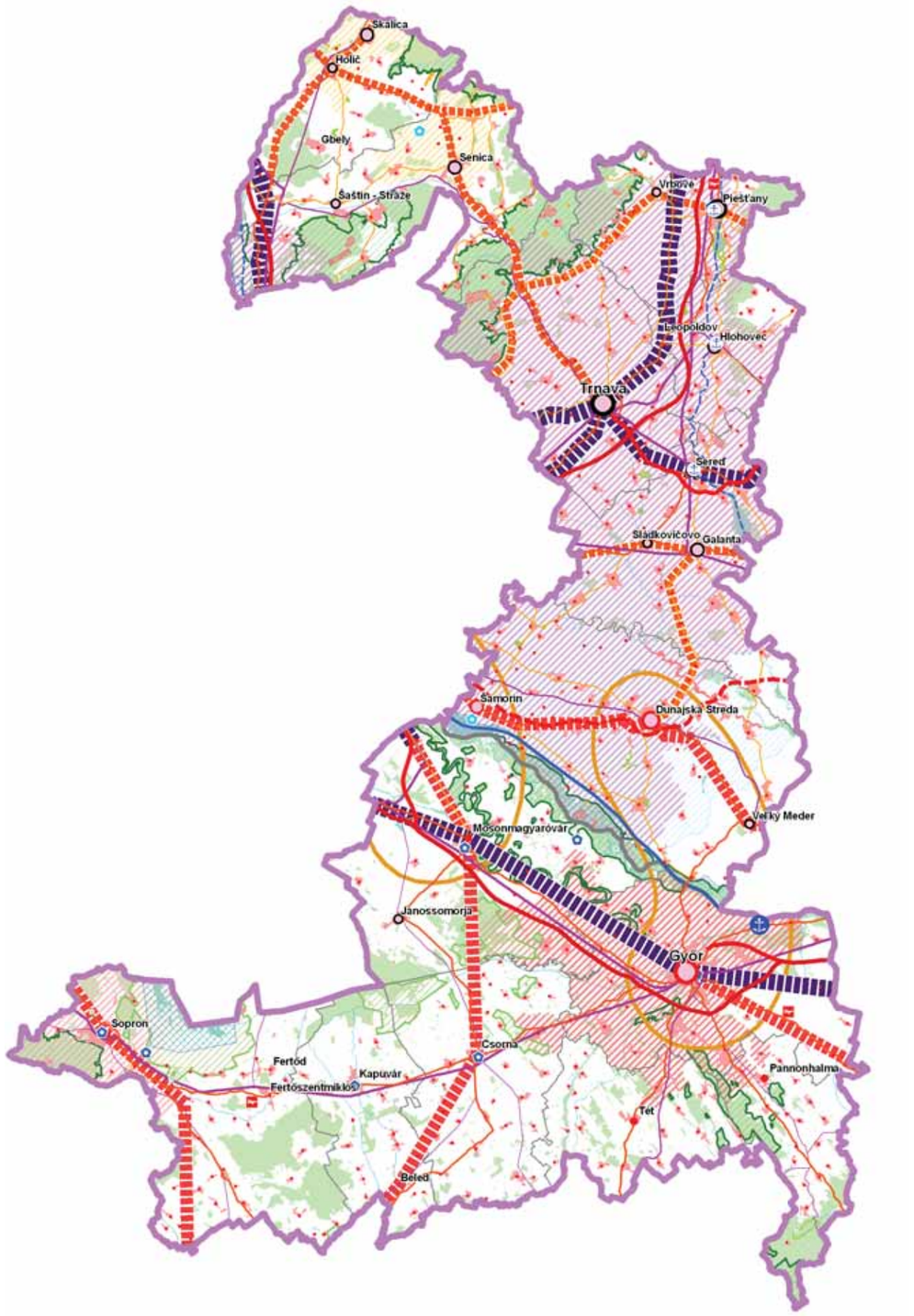
M: Development of international trade; International cooperation; Focusing on partnerships in cross-border cooperation with neighboring countries;

SO 11: Unique touristic industry

P 11.1: Development of touristic attractions

M: Attractive reconstruction of historical town centers; Development of touristic marketing strategy; Utilization of touristic potential of unique landscapes; New health service facilities

Graph 5: E indicators status in 2020

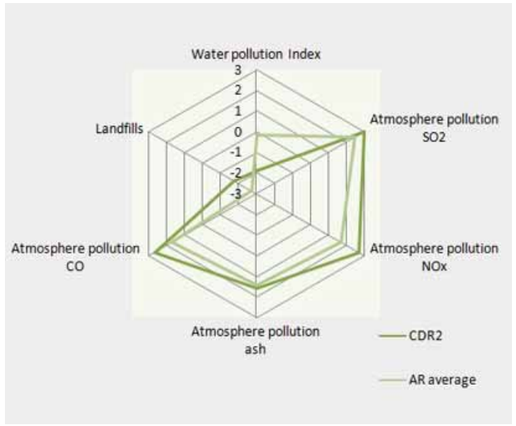


SWOT analysis

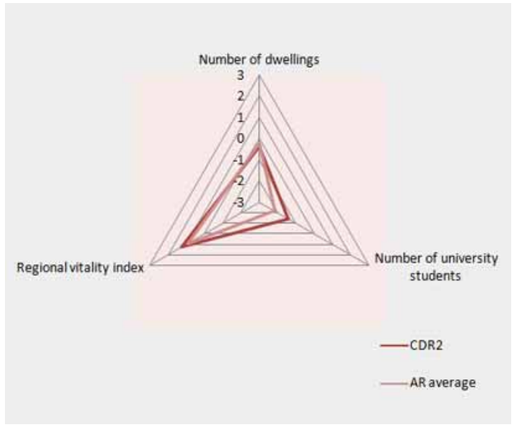
GS	Strengths	Weaknesses
NC	High share of the best quality farm land Relatively high rate of protected sites Very low emission production Relatively high number of water sources with sufficient yield High number of arable land	High production rate of communal waste Low rate of waste recovery and waste separation Air pollution from transportation, economy and construction activity Illegal landfilling Low rate of forests
SSHR	Positive migration balance High share of working age population Highly educated labour Polycentric system of settlements	Deacreasing share of young population Structural unemployment Housing shortages Low vitality index
TTI	High density of primary and secondary roads Constructed motorways D1 and D2, Modernized conventional railway VII TEN corridors Renewable energy production	Crossborder connection through Danube Low level of sewage treatment systems Unsatisfactory drinking water supply Few ports on Danube river
E	Highly educated population, universities Unemployment rate High rate of SMEs Tourism potential High level of industrial concentration	Lower share of market services Lower share of production with high added value Insufficient usage of geothermal sources Weak purpose-oriented educational basis Insufficient demand for innovation
GS	Opportunities	Threats
NC	Afforestation of the area Eliminate emissions and water pollution Geothermal resources incidence Higher and broader protection of natural areas Reduce the coal based energy sources Establishing danube natural parks	Illegal landfills in the area High pressure on the environment Non appropriate protection of the underground drinking water Increasing environmental pollution Uncontrolled mining of gravel
SSHR	National stimulation policy to increase labour mobility Family oriented social policy EU support for polycentric urban development Growth pole oriented regional policy EU support for transborder co-operation	Opening EU labour market Emerging agglomeration disadvantages Decreasing readiness for co-operation between settlements and urban centres Parallel development tendencies in neighbouring regions
TTI	Modernisation of the remaining corridor conventional railways No. 110, 130 and 131 Construction of expressway R7 Construction of the Vah waterway Danube transport potential Renewable based energy production	Insufficient wastewater treatment Natural Gas and Crude Oil import Limited investment opportunities of self-government counties for maintaining and developing transport infrastructure Low level of major infrastructure investment
E	Partnerships between education institutions and business institutions at the regional level Inflow of foreign investments Intensification of cross-border trade New industrial facilities on the basis of existing concentrated industry	Outflow of qualified labour forces Inefficient promotion of R&D Aging of population Insufficient development of tourist infrastructure The domination of multi national commercial chaines jeopardize local economy

The CDR No.2 Dunajská Streda – Győr lies in the area of ARGE Subregion ASH (Austria, Slovakia and Hungary). CDR consists of two NUTS3 regions (Trnava county and Győr-Moson-Sopron county). Total area is 8 358 km².

Graph 6



Graph 7



CDR Strategy

General Scheme: Natural Conditions

Global objective: To create comfortable environment with focus on sustainable growth

SO 1: To improve the environment in terms of air quality

P 1.1: State of the environment

M: high requirements for chimneys and vents to ensure adequate dispersion, fees for operators of stationary sources for air pollution, insulation of residential houses in selected residential areas, regular maintenance of equipment and spraying of communications of industrial parks, .

P 1.2: Increase energy efficiency and alternative energy sources

M: promoting environmental thinking method, using alternative energy sources to help regulatory environment forming, encourage the sustainable use of wind energy, biomass, hydropower, energy conservation and efficient energy improvements innovations

SO 2: To increase the proportion of waste recycled at the expense of waste disposal by dumping

P 2.1: Waste management

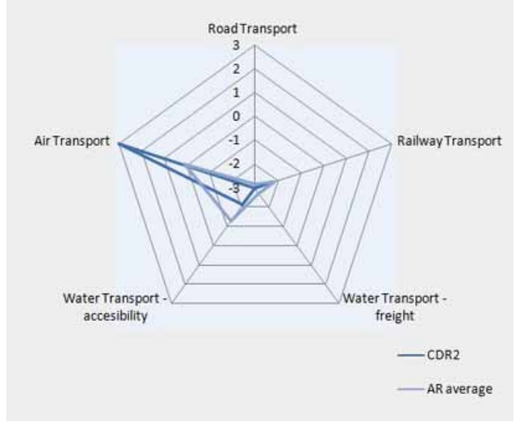
M: regulate waste management in accordance with waste management Program, coordinate the construction of landfills to ensure catchment and capacity requirements for waste disposal, create spatial conditions for the construction of regional plants for the separation and recycling, support recycling and separation equipment from the sources of the recycling Fund, Increase the material valorization of building waste; .

SO 3: To check the status of water quality and prevent deterioration of drinking water by regular monitoring

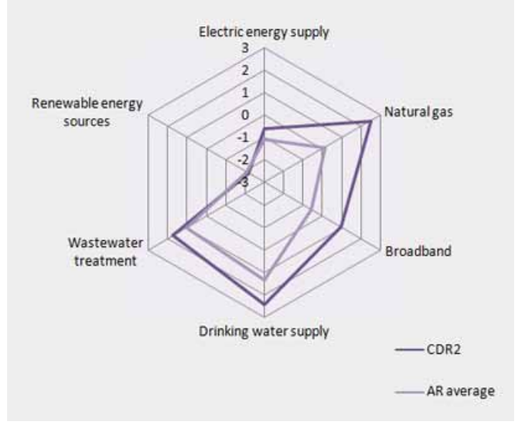
P 3.1: Water management

M: synchronize wastewater discharge out of existing sewage with acts legislative, monitoring of pesticide substances in groundwater, building new and improving the technical parameters of existing water systems, supporting wastewater treatment technologies.

Graph 8



Graph 9



SO 4: Increasing environmental awareness of citizens

P 4.1: Nature conservation and landscape protection

M: Education and increasing of ecological awareness, Strict control of pollutants.

Graph 6: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Sustainable social and even spatial development in the Komárom-Komárno CDR

SO 5: Building knowledge based economy

P 5.1: Adapting the content of education to the needs of labour market

M: Elementary education and the needs of the 21st century, Better technician-training on secondary level, Adequate higher education development (e. g.: in engineering and renewable energy production, pedagogy, etc.), Retraining of unemployed people, Cross-border approve of certificates

SO 6: Strenghtening internal cohesion of the region

P 6.1: Education and regional and local identity development

M: Foreign language education, Strenghtening regional identity in education, Cross-border get-together programmes, Common history – common future programmes

SO 7: Sustainable regional society

P 7.1: Equal chances for all settlements

M: Strenghtening local primary education, Knowledge for local industry and services (3L program), Minority for majority (language and cultural programmes), Cross-border partner programs for settlements (twin-settlement programs)

P 7.2: Development of local social security

M: Labor programs for the poor and unemployed, Inclusion of newcommers (integration of immigrants), Local programmes for the old

Graph 7: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Modern transport and Effective, innovative and environment-friendly technical infrastructure

SOo8: Transport

P 8.1: Road Network

M: construction and operation of the expressway R7 Bratislava – Dunajská Streda – Nové Zámky – Lučenec; Diverting transit turnover of goods on railway and water from road transport

P 8.2: Railway Network

M: Modernization of railway lines, Implementation and operation of high speed rail line Bratislava - Žilina – Varšava, Rail passenger transport to regional and local rail cancelling, Establishment of multimodal public transport.

P 8.3: Air Transport

P 8.4: Waterways and Ports

M: Implementation of a European priority project no. 18 in section Sap - Mohacs the territory of the region, Construction and operation of the Vah waterway; Integration of passenger shipping into the system of public transportation; Passenger ships' and jacht ports; Performance of trimodal product oriented ports.

P 8.5: Intermodal Transportation System and Terminals

M: Construction and operation of intermodal transport terminal Leopoldov, Establishment of multimodal public transport, Performance of trimodal product oriented ports.

SO 9: Energy efficiency and increased use of RES

Graph 8: T indicators status in 2020

P 9.1: Efficient Electric Energy Sources

M: Using alternative energy sources; Measures aimed at increasing energy efficiency; Increase electricity production from RES (encourage the sustainable use of wind energy, biomass and hydropower)

P 9.2: Natural Gas Supply

M: New underground natural gas storage Sered', Increase the proportion of supplied inhabitants by development of natural gas network

SO10: Development of Information Society

P 10.1: Telecommunications Network and Digital literacy development

M: High speed networks innovation; Support of wider broadband access especially in rural parts of region.

SO 11: Development of drinking water supply and waste water systems

P 11.1: Water Supply development

M: Increase the proportion of inhabitants supplied by drinking water, Extension of long-distance water supply (Gabčíkovo)..

P 11.2: Wastewater treatment development

M: Supporting wastewater treatment technologies, Wastewater collection and treatment systems of agglomerations above 2000

Graph 9: TI indicators status in 2020

General Scheme: Economy

Global objective: Competitive economic base, with an emphasis on innovation and SME support and developed industrial – touristic region

SO 12: Create the attractive business environment with regard to SMEs

P 12.1: Business environment

M: Attracting new industries to the economy of the region; Support transit and logistics centers; Mobilization of inactive working power; Linking public service institutions in the region; .

SO 13: Create conditions to support various tourist attractions

P 13.1: Tourism

M: Tourism cluster - the completion of a strong position in Europe; Support (presentation and promotion abroad) for a spa and health tourism; Tourism infrastructure development; Reconstruction of historical town centers; Development of touristic marketing strategy; .

SO 14: Promoting research and development activities in SMEs and R & D centers

P 14.1: Research and development

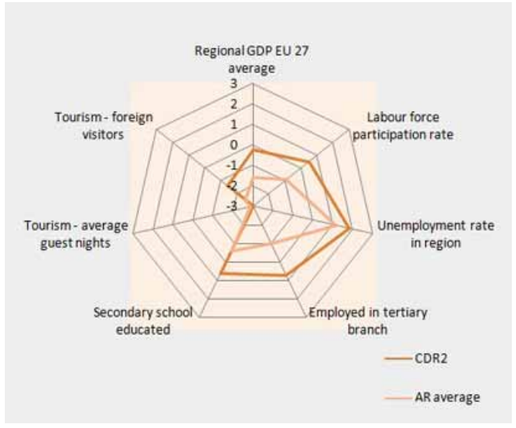
M: Support the establishment and development of incubators, technology centers, technology parks; Promoting innovation for SMEs; Increase the participation of universities to meet the economic and social needs of society .

SO 15: The creation of conditions for rural development

P 15.1: Rural development

M: Supporting and creating conditions for rural economic development; Program of support for the development of agricultural self-employed operators, bio-economy, forestry and fisheries

Graph 10

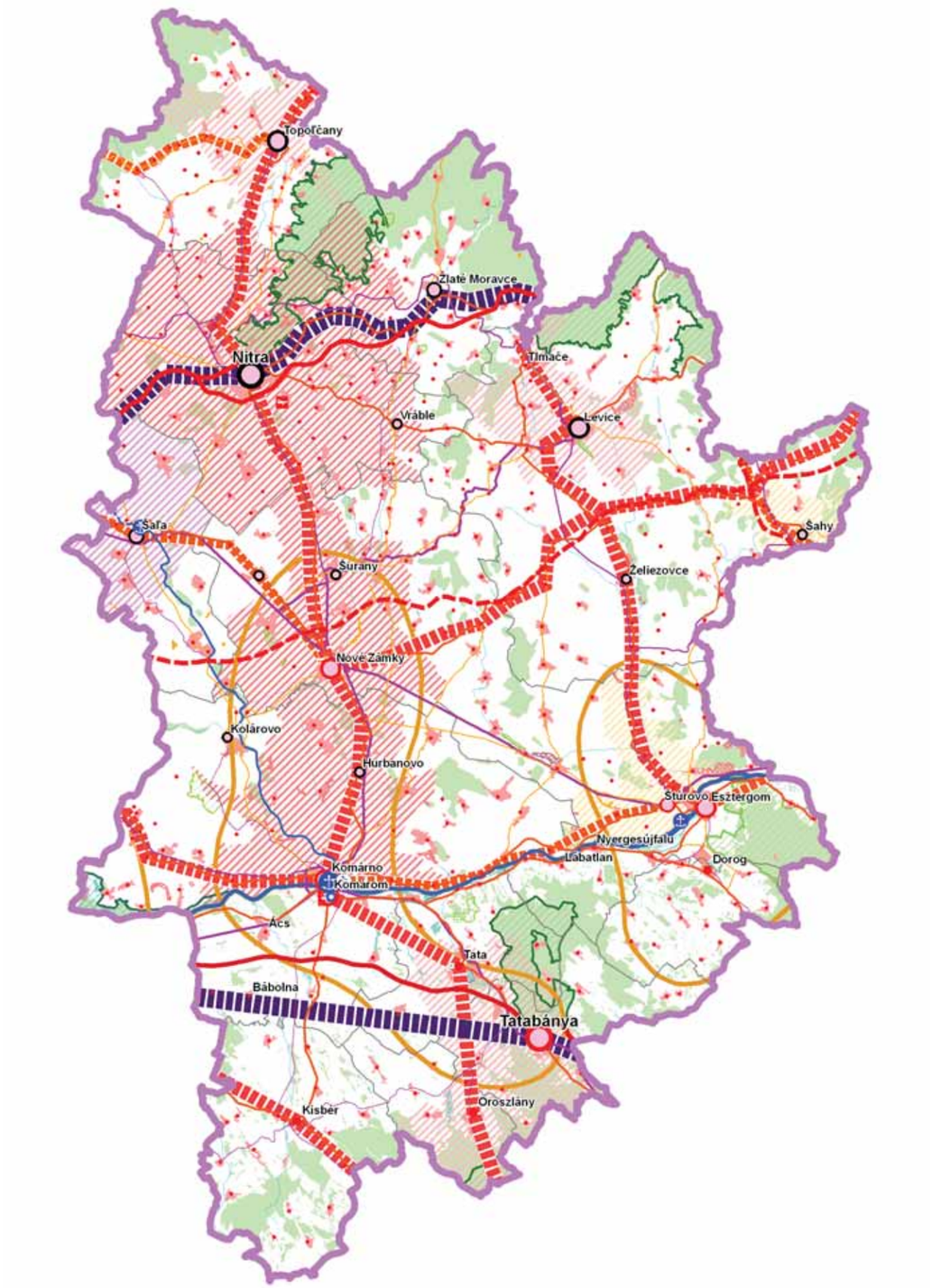


SO 16: Effective education system reflecting the current labor market demands and modern trends in education

P 16.1: Education

M: Improving the quality of teachers, including the teaching profession more attractive for high-quality young teachers; Education economical, efficient, flexible / responsive to the situation / requirements in the labor market; Innovative teaching methods

Graph 10: E indicators status in 2020

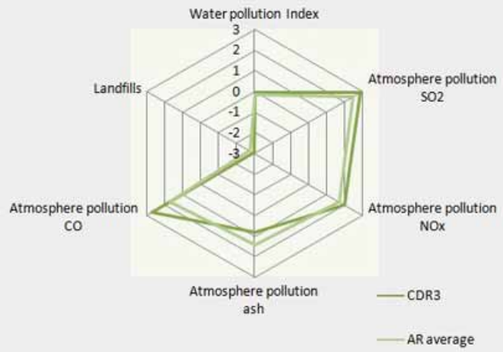


SWOT analysis

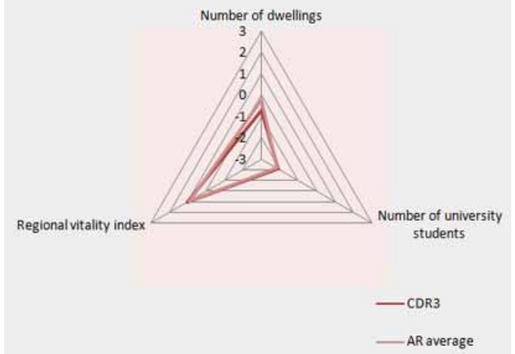
GS	Strengths	Weaknesses
NC	diverse landscape with hilly and plain areas rich fauna and flora considerable surface water sources (Danube and its siderivers) huge amount of groundwater (thermal and karstic water)	high level of air pollution large heavily polluted areas polluted inflowing rivers (Danube, Váh) partly or not solved waste management underdeveloped flood protection
SSHR	balanced settlement network with medium-size villages even distribution of small and medium-sized towns advantageous position on Budapest-Vienna innovation axes stable educational background (primary and secondary level)	lack of important regional centres (e. g.: Nitra, Győr) gravitation effect of neighbouring regional centres: Nitra, Budapest, Győr, Székesfehérvár weak higher educational potential (small colleges, univeristy) small number of classes in high-tech education on secondary level
TTI	important railway and highway routes across the region (on the Hungarian side) – Vienna-Budapest innovation axes developed water and electricity networks high ratio of households connected to natural gas network in villages and garden suburbs the most block of flats are connected to district heating systems	the wastewater network underdeveloped the quality of minor (local) road network is not sufficient Komárno region is not connected to the Slovakian national lack of HSPDA mobile network coverage especially in buildings high costs of cross-border info-communication (mobile fees, etc.) high ratio of block of flats without any renovation (modern heating system, thermal insulation)
E	high number of TNCs in the region (especially in Hungarian part) Relative low wages and salaries mobile workforce (cross-border workers) traditions (tacit knowledge) in agriculture and industry on both sides of the border	low activity rate (especially in Hungary) high rate of unemployment low level of skilled workers (with degree or technical knowledge) high mobility towards the large regional centres (Győr, Budapest, Nitra, Bratislava) one-sided economic development (some big TNCs)
GS	Opportunities	Threats
NC	establishing cross-border natural protection areas more popular eco- and hunter tourism in the region higher demand on renewable energy sources demand for products of eco-farms development of local food supply chains	increasing air and/or water pollution outside of the region delaying of selective garbage collection heavy flood damages (insufficient protection system) decreasing number of incoming eco-tourists
SSHR	stabilising the number of inhabitants in local village network increasing number of fields of cooperation between the members of small and medium towns state sources for the adjustment of secondary education to the demand of labour market	increasing gravitation power of regional centres decreasing population – diminishing market inadequate development of education system backwarding of bilingual education (in Slovakia) lack of cooperation in education programmes between the both sides
TTI	growing sources for local infrastructural development (wastewater management) EU-sources for further cross-border infrastructural development (alternative routes, new brdige) international harbour development in Komárno and Komárom marking new ferry routes between Danube bridges	decreasing sources for infrastructural development at local level diminishing state and EU sources, altering EU-priorities from 2014 decrasing importance of Danube as an international transport route (navigability) lagging behind development of dwellings – high costs of owners
E	diversification of the economy with new FDI (new investors) development of the SME-sector (financial, human, IT, etc.) more effective utilisation of factor endowments	closure of large TNCs (e. g. Nokia) further development of „dual-economy” delaying reforms of education system, dissemination of outdated knowledge stronger attraction of regional centres (growth poles)

The CDR No.3 Nové Zámky - Komárno / Komárom - Tatabánya consists of two NUTS3 regions (Nitriansky county and Komárom-Esztergom county). Total area is 8611 km2.

Graph 11



Graph 12



CDR Strategy

General Scheme: Natural Conditions

Global objective: Forming a sustainable and less polluted natural environment in the Komárom-Komárno CDR

SO 1: More clear natural environment

P 1.1: Natural protection areas

M: Protection of biodiversity, Support of sustainable forestry, Protection of rivers as natural habitats, Soil protection

P 1.2: Management of hazardous areas and activities

M: Measuring of polluted sites, Prevention and disposal, Recultivation selected polluted areas, Flood protection

SO 2: More livable and more modern and attractive built environment

P 2.1: Development of local food production and tourism

M: Development of local eco-farming, Sustainable tourism (rural-, bicycle-, eco-tourism), Local handicraft development

P 2.2: More efficient energy management

M: Measure the renewable energy potential, Exchange of ideas – cooperation in R&D, Local energy production with renewable sources, Energy-efficient isolation systems in households and public institutions

Graph 11: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Sustainable social and even spatial development in the Komárom-Komárno CDR

SO 3: Building knowledge based economy

P 3.1: Adapting the content of education to the needs of labour market

M: Elementary education and the needs of the 21st century, Better technician-training on secondary level, Adequate higher education development (e. g.: in engineering and renewable energy production, pedagogy, etc.), Retraining of unemployed people, Cross-border approve of certificates

SO 4: Strenghtening internal cohesion of the region

P 4.1: Education and regional and local identity development

M: Foreign language education, Strenghtening regional identity in education, Cross-border get-together programmes, Common history – common future programmes

SO 5: Sustainable regional society

P 5.1: Equal chances for all settlements

M: Strenghtening local primary education, Knowledge for local industry and services (3L program), Minority for majority (language and cultural programmes), Cross-border partner programs for settlements (twin-settlement programs)

P 5.2: Development of local social security

M: Labor programs for the poor and unemployed, Inclusion of newcommers (integration of immigrants), Local programmes for the old

Graph 12: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Building a phisically and digitally integrated region

SO 6: Developing physical connectivity

P 6.1: Development of the main corridors

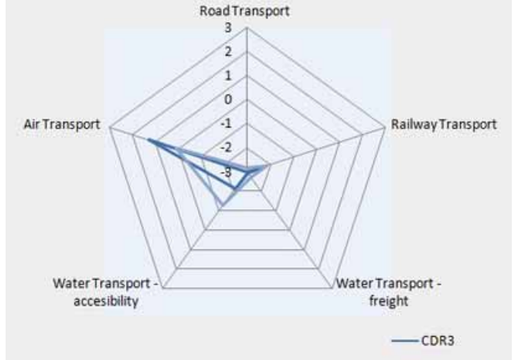
M: Road network development (by pass roads, freeways, etc.), Development of cross-border traffic routes (bridge), Attraction of regional centres, Development of the navigability of Danube, Ferry and port development

SO 7: Sustainable local places

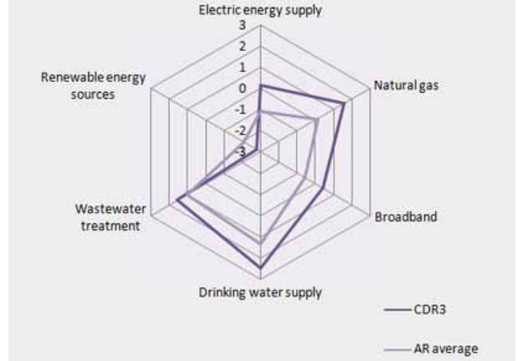
P 7.1: Local traffic networks in transition

M: Sustainable local public transport development in towns, Cross-border public transport management (legal

Graph 13



Graph 14



rules, physical realisation), Fostering local public transport

P 7.2: Local public services on a higher standard

M: Infrastructural development for sustainability (natural gas, water and wastewater-network, etc.), Mapping the possibilities of renewable energy production int he region, Support of local energy production (local renewable sources)

SO 8: Connected virtual and physical spaces

P 8.1: More intensive intraregional communication

M: Fostering local digital communication infrastructure, Digital media services, Cross-border communication – ways of staying in touch

Graph 13:T indicators status in 2020
Graph 14: TI indicators status in 2020

General Scheme: Economy

Global objective: Increasing welfare based on sustainable economic development

SO 9: Economic development

P 9.1: Setting new TNCs

M: Establish regional economic development agency, Fostering regional (cross-border) supply chains, Setting up incubator houses for new spin-offs

P 9.2: SME-development

M: Supporting cross-border supplier network, Fostering intraregional cooperation (tourism, retail, etc.), Regional knowledge transfer for SMEs (technical, business), Language education programmes for SMEs

SO 10: Advantageous regulatory environment for companies

P 10.1: More flexible local and regional regulations

M: Smarter company set up, Harmonisation of local taxes

P 10.2: Fostering cross-border economic activity

M: Facilitate cross-border company establishment, Establishing cross-border economic cooperation agencies, Supponrting cross-border appearance of SMEs, Research the characteristics of cross-border labour flows

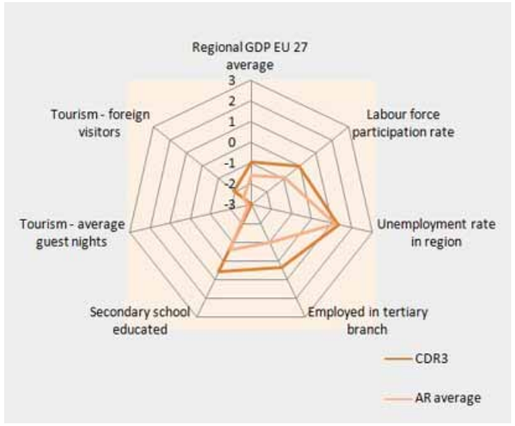
SO 11: Better utilisation of regional economic sources

P 11.1: Securing suitable, sufficient workforce

M: Research the characteristics of regional demand and suppy in labour force, Short term education programmes, Supporting flexible employment

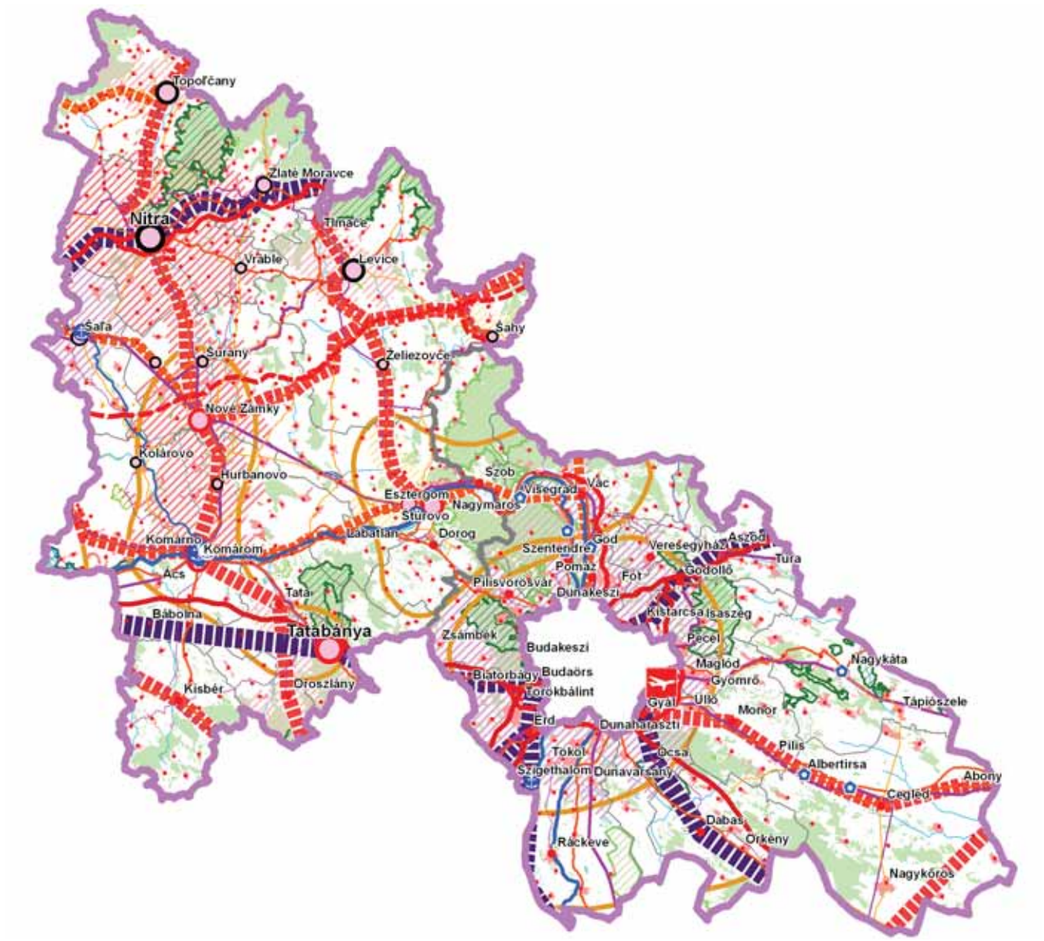
P 11.2: Supporting endogenous capital investment

Graph 15



M: Researching needs of local investors in the region, Supporting local investments of companies operating in the region

Graph 15: E indicators status in 2020

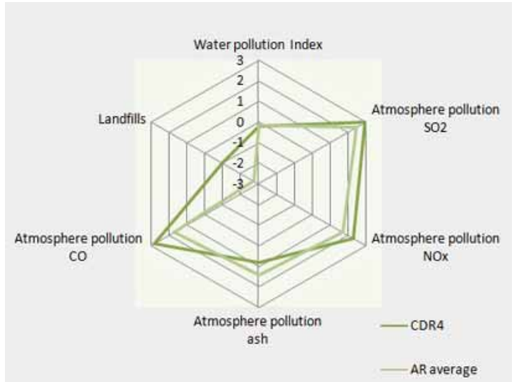


SWOT analysis

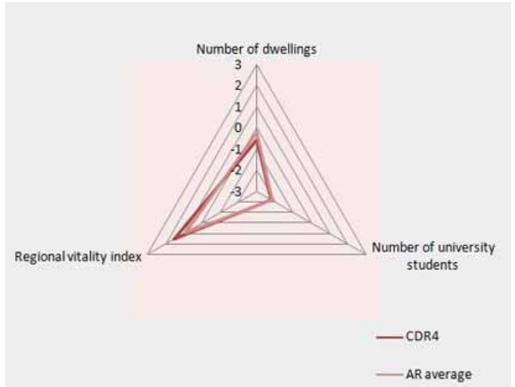
GS	Strengths	Weaknesses
NC	Favourable county morphology The best conditions for agricultural production development Wide variations in natural conditions and high biodiversity Significant reserves of groundwater	Low share of protected areas Few water sources Relatively significant air pollution considering to number of important sources High waste production and its low assessing level Heavily contaminated groundwater and surface water
SSHR	Developed agglomerations around the most important centres Well distributed network of medium size centers Geographical location Polycentric system of settlements	Poor developed overregional transport network High share of small municipalities up to 2 000 inhabitants Infrastructural deficiencies of accessibility Relatively few students in higher education Missing technological higher education
TTI	High density of primary and secondary roads Constructed expressway R1 Danube ports in Komárno and Štúrovo Personal railway connection with the suburbs of Budapest High level of energy production Adequate natural gas and electricity supply	Poor road connection along the Danube Dated technological level of transport facilities Low level of sewage treatment systems development and accessibility Insufficient RES production Difficult crossborder connection through Danube
E	High potential of agricultural production Multi-sectional structure of industry, especially electrical energy Sufficient labour forces Cross-border cooperation Tourism potential	Lower share of manufacturing process in agriculture Slow increase in highly educated population Poor financial sources of entrepleneurs Lack of institutions of higher education Lack of cooperation between companies
GS	Opportunities	Threats
NC	Implementation of comprehensive systems of waste separation and recycling Better use of renewable energy potential Development of new and efficient technology to eliminate emissions and water pollution Establishing danube natural parks	The gradual degradation of the environmental elements Increasing risk of floods and droughts due to climate change The loss of valuable ecosystems Development of industrial production and transport Reducing the area of quality agricultural land
SSHR	Dynamically developing scientific and technological parks Increasing interest for cultural and religious tourism Support of Budapest agglomeration as a special functional region	Increasing competitive advantages of neighbouring territories Decreasing readiness for co-operation between settlements and urban centres Centralised regional development policy
TTI	Numerous wind farms and photovoltaic power plants Modernisation of corridor conventional railways Modernisation of Danube ports in Komárno and Štúrovo Construction of expressways Vo railway line construction	Possible limitation of transport by rail transportation system Limited investment opportunities of self-government counties Main drinking water resources located outside of the region Insufficient wastewater treatment Natural Gas and Crude Oil import
E	Developing agro-tourism and soft tourism Revitalization and development of traditional crafts Cross border cooperation Tourism potential development	High proportion of post-productive population Inflexible education system that does not respond to labour market Decline and loss of cultural and historical monuments Lack development of transport system

The CDR No.4 Štúrovo - Esztergom – Visegrad lies in the area of ARGE Subregion ASH (Austria, Slovakia and Hungary). CDR consists of three NUTS3 regions (Nitra county, Komárom-Esztergom county and Pest county) Total area is 15 003 km².

Graph 16



Graph 17



CDR Strategy

General Scheme: Natural Conditions

Global objective: Comfortable environment with focus on sustainable growth

SO 1: Effective system of water management and quality environment

P 1.1: Water management

M: building new water systems, synchronize wastewater discharge out of existing sewage with legislative acts, survey and monitoring of priority environmental burdens, monitoring of pesticides in groundwater, promoting environmental thinking method .

P 1.2: State of the environment

M: plant greenery in urban areas, regular monitoring, service and early troubleshooting of technological equipment, prevent heating with solid fuels, separate collection and recycling development, ensure municipal waste incineration with energy recovery of waste

P 1.3: Increase energy efficiency and alternative energy sources

M: pilot projects of local energy production with renewable sources, using alternative energy sources, individual energy supply support; .

Graph 16: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Higher housing quality and educated inhabitants

SO 2: Increase the level of living standards

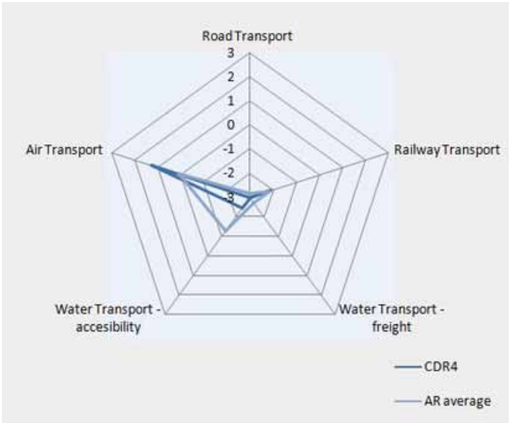
P 2.1: Living Standards

M: Construction of the new municipal lodgings, Construction of the new apartment dwelling house.

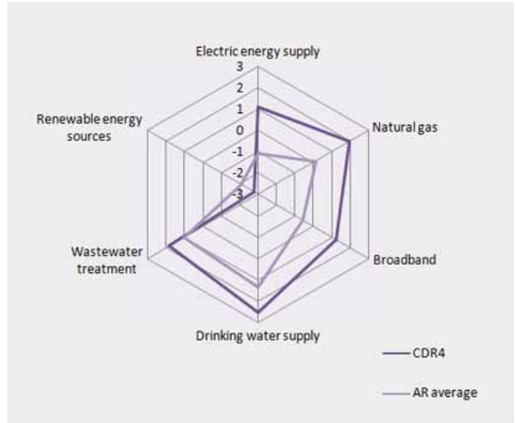
P 2.2:Human Resources

M: Adaptation of the workforce labor market requirements of employers, Developing of programs supporting the reducing the number of unemployed people, Increasing the

Graph 18



Graph 19



educational level of marginalized groups, Developing lifelong learning

Graph 17: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Modern transport and Effective, innovative and environment-friendly technical infrastructure

SO 3: Transport

P 3.1: Road Network

M: construction and operation of the expressway R1, R3 and R7, Diverting transit turnover of goods on railway and water

P 3.2: Railway Network

M: Modernization of railway lines, The Vo railway guide to suburb of Budapest, Rail passenger transport to regional and local rail cancelling,

P 3.3: Waterways and Ports

M: Implementation of a European priority project no. 18 in section Sap - Mohacs the territory of the region, Reconstruction of the port Komárno and Štúrovo on Danube river; Construction of the port operation Vah waterway in Komárno, Passenger ships' and yacht ports at Komárom and Esztergom

P 3.4: Intermodal Transportation System and Terminals

M: Establishment of multimodal public transport, Institute trimodal freighter Port in Esztergom.

Graph 18: T indicators status in 2020

SO 4: Energy efficiency and increased use of RES

P 4.1: Efficient Electric Energy Sources

M: Using alternative energy sources; Measures aimed at increasing energy efficiency; Increase electricity production from RES, Combined Cycle Power Plant, Wind Power Plants establishment;

P 4.2: Electric Energy Networks and Installations

M: Increased supply security, New transmission and distribution lines development

P 4.3: Natural Gas Supply

M: increase the proportion of supplied inhabitants by development of natural gas network, natural gas replacement with renewable sources

SO 5: Development of Information Society

P 5.1: Telecommunications Network and Digital literacy development

M: High speed networks innovation; Support of wider broadband access especially in rural parts of region, Building new and effective utilization of existing infrastructure.

SO 6: Development of drinking water supply and waste water systems

P 6.1: Water Supply development

M: Increase the proportion of inhabitants supplied by drinking water, water supply systems development.

P 6.2: Wastewater treatment

M: Supporting wastewater treatment technologies, Extension and development of existing local wastewater collection and treatment systems, Wastewater collection and treatment systems of agglomerations above 2000.

Graph 19: TI indicators status in 2020

General Scheme: Economy

Global objective: Increase regional economic potential

SO 7: Support of innovations, research and development and tourism

P 7.1: Business environment

M: Creation of the new industrial parks and zones, Regional innovation strategy development, Support for the transfer of science and research into the business environment, Support the small and medium size enterprises.

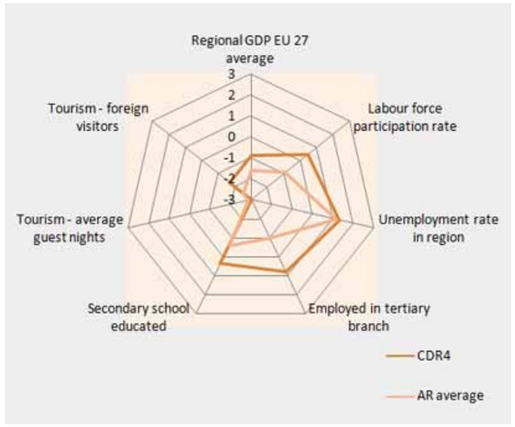
SO 8: Create conditions to support various tourist attractions

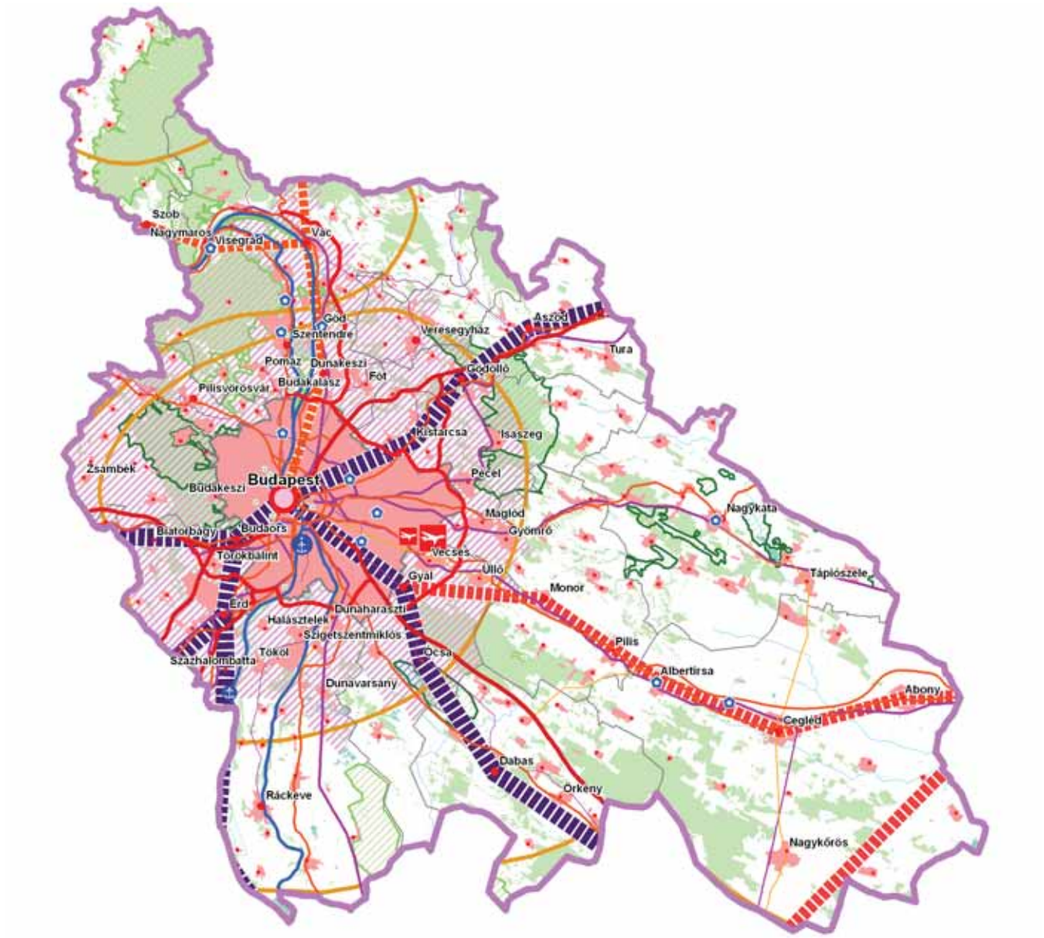
P 8.1: Development of touristic attractions

M: Tourism development and promotion, Development of international Danube cycle path, Improving the technical infrastructure, Touristic destination management development, Reconstruction of historical town centers.

Graph 20: E indicators status in 2020

Graph 20



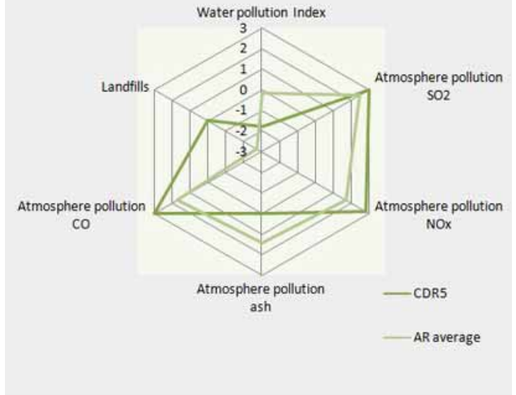


SWOT analysis

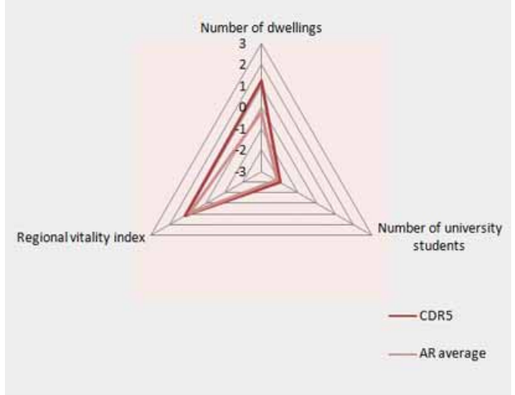
GS	Strengths	Weaknesses
NC	Advantageous geographical location, High rate of waste water treatment (Csepel waste water treatment plant) Strategically significant underground water base, Point source can't be operated, which pollution exceeds the limit value after 30.10.2007	Air pollution due to the inhabitant heating system, Low rate of recycled waste, Illegal landfills even for hazardous waste, Low rate of RES in total energy production, No research and comprehensive studies on the use of RES
SSHR	Outstanding geopolitical and geographic situation Highly concentrated national capacities and institutions Highly educated labor Immigration target in Hungary Well developed international relations	Ageing population Social segregation, intra-urban inequalities Institutional deficiencies of co-operation Agglomeration diseconomies Unclear ownership problems
TTI	Excellent railway connections in Western-Eastern and Southern direction. (IV. V. Vb. Vc. Xb corridors) 30 national routes go across Pest County. 15 routes of those Ports for passenger ships and yachts (Zebegény, Dömös, Nagymaros, Visegrád, Vác, Leányfalu, Horány, Szentendre, Százhalombatta) Excellent capabilities for water tourism High energy production of flexible, natural gas-fueled power stations	Low rate of public transport High rate of individual transport Besides trunk lines, there are too many train line without proper The pollutant emission is outstanding There are traffic restrictions frequently because of flood protection The transit traffic of Csepel free port is limited by 51 fords in Northern direction and 2 fords and deepening in Southern direction.
E	BMA has advantageous location in the country. BMA-Pest county is the optimal economical, cultural center of Hungary with excellent connection to the Danube, Along the main roads were several commercial centers, industrial plants and parks established. Successful industrial parks, prospering multi-national companies	Strong air pollution, insufficient public cleaning services Poor condition of health service facilities (poor physical conditions, lack of medicaments, lack of effective organization of services) Poor condition of home building stocks, lack of proper thermal insulation (specific heating costs are double of Austrian ones)
GS	Opportunities	Threats
NC	More broad financial sources (from the EU), Environmental awareness in the private sector as well, More societal participation for the public in the environmental issues, Promotion of bike roads, bike network, Build a composting station,	Increase of the waste collection fee, Illegal landfills EU funds will not be used properly, Extreme rainy weather causes flooding, Pollution of sensitive water base, High rate of inland water and potentially flooded areas,
SSHR	Increasing business interest towards East-Central European countries EU support for metropolitan development Increasing interest in health and cultural tourism National growth pole oriented regional development Increasing international migration – positive brain drain	Long-lasting economic crisis Emerging agglomeration diseconomies Increasing competitive advantages of national and international competitors Increasing international migration – negative brain drain
TTI	Extension transport potential of BMA in Pest county Constructing bypasses for transit railway lines to reduce the transit load of freight transport in the region Stabilization of water level Reorganization of public transport to strongly reduce traveling Organizing and serving near destinated passenger flow City-logistics	Overpopulation Increasing pollutant emission Increasing environmental damages Increasing individual transport cause permanent congestions. Accumulation of opportunities in Budapest Construction of Danube-Tisza channel postponed
E	Better utilization of Danube cooperation. The Danube should be the symbolic and practical element of regional dynamism. Development of embankment areas, new attractive element New cooperation with commuter belt, proportioned better distribution of financial sources, and tasks Integrated public transport in Budapest Metropolitan area, introduction of intermodal transport system (development of P+R system, new parking facilities)	EU crisis, would deeply effect the financial sources New economic crisis in Hungary would stop all important investments By the effects of no policy changes, BMA-Pest county would arrear in international redistribution of European market Confrontative town policy could block healthy compromises.(It should jeopardize the continuity of long run policy) The lack of development of transport system jeopardizes the realization of all development priorities.

The CDR No.5 Budapest - Pest consists of two NUTS3 regions (Budapest capital and Pest county). Total area is 6917 km2.

Graph 21



Graph 22



CDR Strategy

General Scheme: Natural Conditions

Global objective: Healthy municipal environment

SO 1: Regulated and well utilized Danube River

P 1.1: Possible utilization of Danube River

M: Water transport-navigability, Csepel recreational area (development of resort areas, National home program, Revitalization of lagged area, Intermodal traffic system between BMA-Pest County, Tourist cluster around Budapest for new tourist short-time packages, Development of tourist centers of Pest county (new hotel and catering facilities, Livable city open to the Danube

P 1.2: Environmental friendly transport system

M: Water transport-navigability, Livable city open to the Danube, Improvement of bike infrastructure, National monitoring emission of greenhouse gases, Establish more automatic measurement systems

SO 2: Well balanced green megapolis

P 2.1: Possible utilization of Danube River

M: Water transport-navigability, Csepel recreational area (development of resort areas), National home program, Revitalization of lagged area, Intermodal traffic system between BMA-Pest County, Tourist cluster around Budapest for new tourist short-time packages, Development of tourist centers of Pest county (new hotel and catering facilities), Livable city open to the Danube

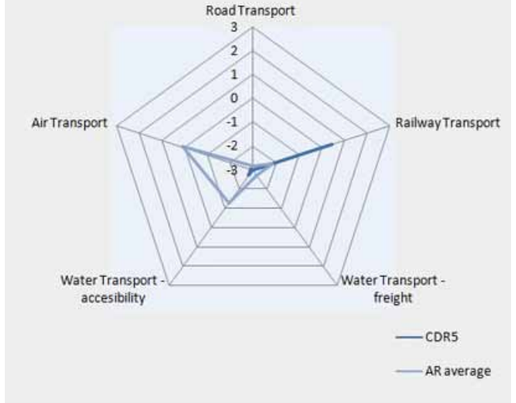
P 2.2: Level waste management system

M: Stop illegal land filling, Match the regional waste system borders to the County and Region borders

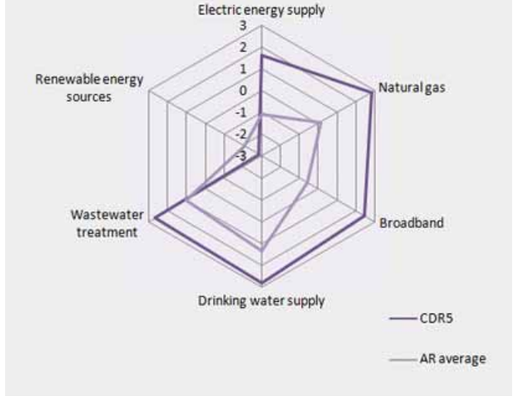
P 2.3: Integrated monitoring system of harmful emissions

M: Livable city open to the Danube, Improvement of bike infrastructure, Increasing green corridors, Increasing surface of green roofs, Monitoring emission of greenhouse gases, Establish more automatic measurement systems

Graph 23



Graph 24



SO 3: Energy effected public transport

P 3.1: Possible utilization of Danube River

M: Water transport-navigability, Csepel recreational area (development of resort areas), National home program, Revitalization of lagged area, Intermodal traffic system between BMA-Pest County, Tourist cluster around Budapest for new tourist short-time packages, Development of tourist centers of Pest county (new hotel and catering facilities, Livable city open to the Danube

P 3.2: Environmental friendly transport system

M: Water transport-navigability, Livable city open to the Danube, Improvement of bike infrastructure, National monitoring emission of greenhouse gases, Establish more automatic measurement systems

P 3.3: Integrated monitoring system of harmful emissions

M: Livable city open to the Danube, Improvement of bike infrastructure, Increasing green corridors, Increasing surface of green roofs, Monitoring emission of greenhouse gases, Establish more automatic measurement systems

SO 4: Coordinated development of RES

P 4.1: Possible utilization of Danube River

M: Water transport-navigability, Csepel recreational area (development of resort areas), National home program, Revitalization of lagged area, Intermodal traffic system between BMA-Pest County, Tourist cluster around Budapest for new tourist short-time packages, Development of tourist centers of Pest county (new hotel and catering facilities, Livable city open to the Danube

P 4.2: EU level waste management system

M: Stop illegal land filling, Match the regional waste system borders to the County and Region borders

Graph 21: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Livable green BMA-PC CDR

SO 5: Well balanced settlement structure

P 5.1: Development of CDR by functional zones

M: Csepel recreational area (development of resort areas revitalization of Small Danube), Revitalization of lagged areas, Building up a state and local government owned stock of rental house and flats, Revitalization of town centers with decentralized functions (upgraded shops and serviced), Upgrading undeveloped district considering the social problems

P 5.2: National home program

M: Csepel recreational area (development of resort areas revitalization of Small Danube, Revitalization of lagged area, Building up a state and local government owned stock of rental house and flats, Revitalization of town centers with decentralized functions (upgraded shops and serviced)

P 5.3: Development of town centers

M: Revitalization of lagged area, Revitalization of town centers with decentralized functions (upgraded shops and serviced), Development of public transport, introduction of intermodal system, Upgrading undeveloped district considering the social problems

SO 6: High territorial cohesion

P 6.1: Development of CDR by functional zones

M: Csepel recreational area (development of resort areas revitalization of Small Danube), Revitalization of lagged areas, Building up a state and local government owned stock of rental house and flats, Revitalization of town centers with decentralized functions (upgraded shops and serviced)

P 6.2: National home program

M: Csepel recreational area (development of resort areas revitalization of Small Danube, Revitalization of lagged area, Building up a state and local government owned stock of rental house and flats, Revitalization of town centers with decentralized functions (upgraded shops and serviced)

P 6.3: Development of town centers

M: Revitalization of lagged area, Revitalization of town centers with decentralized functions (upgraded shops and serviced), Development of public transport, introduction of intermodal system, Upgrading undeveloped district considering the social problems

SO 7: CDR in gate and bridge function

P 7.1: Development of CDR by functional zones

M: Csepel recreational area (development of resort areas revitalization of Small Danube), Revitalization of lagged areas, Building up a state and local government owned stock of rental house and flats, Revitalization of town centers with decentralized functions (upgraded shops and serviced)

P 7.2: Development of town centers

M: Revitalization of lagged area, Revitalization of town centers with decentralized functions (upgraded shops and serviced), Development of public transport, introduction of intermodal system, Upgrading undeveloped district considering the social problems

P 7.3: Development of high education and scientific basis

M: Reorganization of high education system and research institution, Target oriented life-long learning and vocational training, Stimulating co-operation between universities and private and public actors, Supporting knowledge city functions

SO 8: Centers of Hungarian innovations

P 8.1: Development of high education and scientific basis

M: Reorganization of high education system and research institution, Target oriented life-long learning and vocational training, Stimulating co-operation between universities and private and public actors, Supporting knowledge city functions, Qualitative vocational training

Graph 22: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Effective, integrated sustainable infrastructure

SO 9: Well balanced transport system

P 9.1: Renewal of transport infrastructure

M: Reconstruction of the existing road network, bypass program, finish mo ring, Reconstruction and development of railway network with bypass program (vo line + bridge), Multimodal traffic system between BMA-Pest County (P+R system), Integration of suburban trains with country wide railway system

P 9.2: Energy effective multimodal transport

M: Reconstruction of the existing road network, bypass program, finish mo ring, Reconstruction and development of railway network with bypass program (vo line + bridge), Multimodal traffic system between BMA-Pest County (P+R system), Integration of suburban trains with country wide railway system

SO 10: Utilization of Danube River

P 10.1: Energy effective multimodal transport

M: Reconstruction of the existing road network, bypass program, finish mo ring, Reconstruction and development of railway network with bypass program (vo line + bridge), Multimodal traffic system between BMA-Pest County (P+R system), Integration of suburban trains with country wide railway system

P 10.2: New Danube Program

M: Building and modernization ports and services for passenger ships and yachts, Building and modernization ports for passenger ships and yachts in Zebegény, Dömös, Nagymaros, Visegrád, Vác, Leányfalu, Horány, Szentendre, Százhalombatta 7. Energy conservation and efficient energy improvements innovation, Peak-load power systems

Graph 23:T indicators status in 2020
Graph 24:TI indicators status in 2020

General Scheme: Economy

Global objective: Tourism and innovative megapolis

SO 11: Region with high purchase power

P 11.1: New distribution of sources between Budapest and Pest County

M: Comprehensive agreements for more proportioned distribution of financial sources in the CDR, New industrial and logistical programs in towns with underutilized capacities (Érd Cegléd, Nagykörös, Csepel Free Port), National home program, Revitalization of lagged area

P 11.2: Development of industrial and logistical capacities

M: New industrial and logistical programs in towns with underutilized capacities (Érd Cegléd, Nagykörös, Csepel Free Port), Devpt of agriculture based industry, Revitalization of lagged area,

SO 12: EU developed logistical area

P 12.1: New distribution of sources between Budapest and Pest County

M: Comprehensive agreements for more proportioned distribution of financial sources in the CDR, New industrial and logistical programs in towns with underutilized capacities (Érd Cegléd, Nagykörös, Csepel Free Port), National home program, Revitalization of lagged area

P 12.2: Development of industrial and logistical capacities

M: New industrial and logistical programs in towns with underutilized capacities (Érd Cegléd, Nagykörös, Csepel Free Port), Devpt of agriculture based industry, Revitalization of lagged area, Building up intermodal system

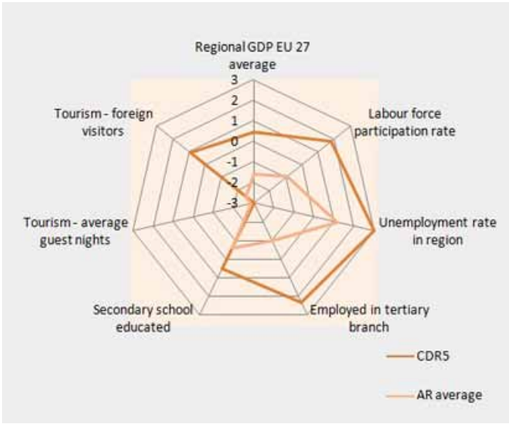
SO 13: High ranking touristic center in Europe

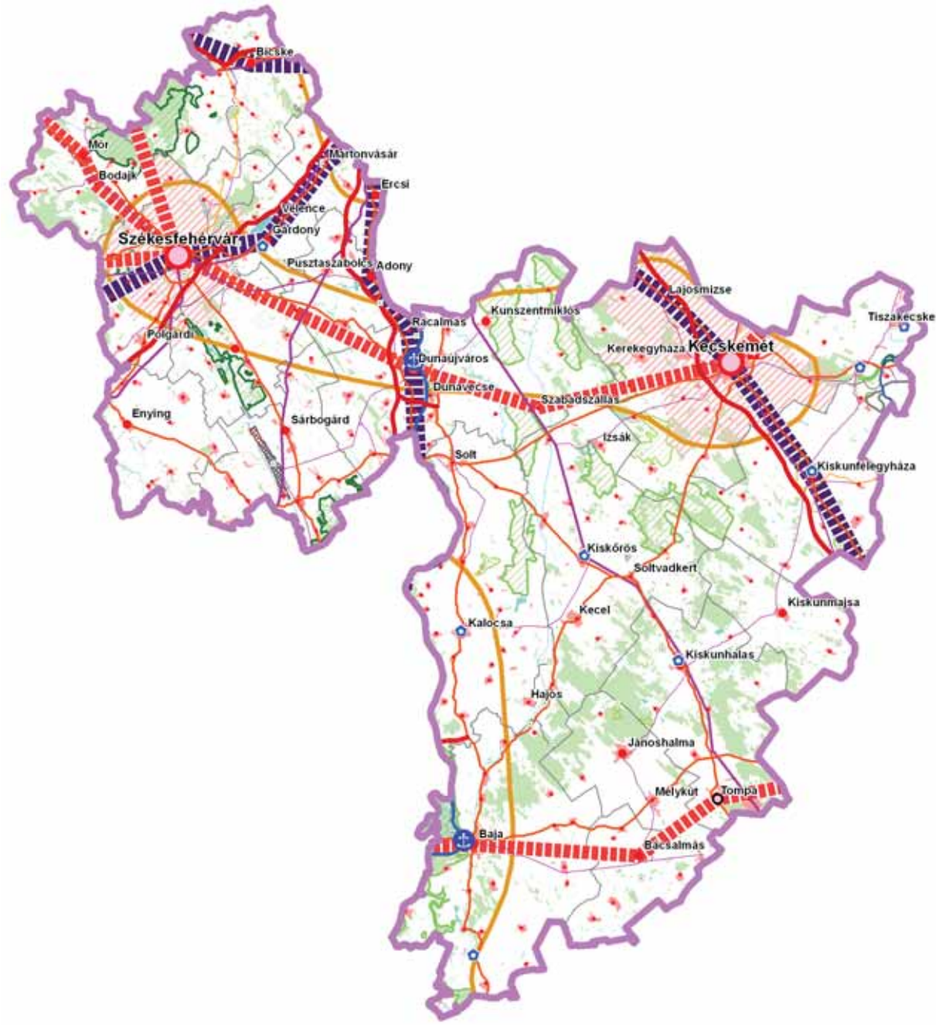
P 13.1: Integrated development of tourism

M: Tourist cluster around Budapest for new tourist short-time packages, Remodelling of touristic centers, Development of touristic destination management

Graph 25: E indicators status in 2020

Graph 25



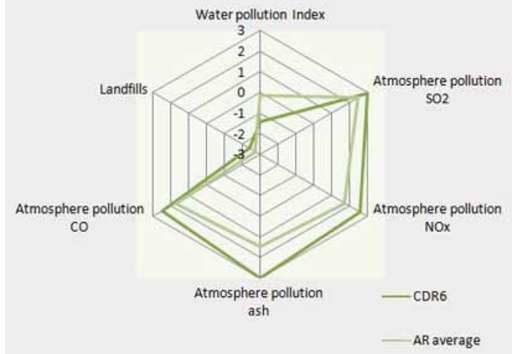


SWOT analysis

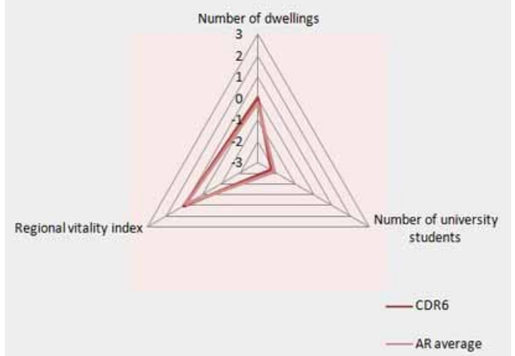
GS	Strengths	Weaknesses
NC	Modern waste water treatment plant with biological cleaning Experience in energetic programs for the block of flats Good quality of soil, arable lands Natural reserves, Kiskunsági National Park High geothermal gradient	Low rate of forests (should be increased from 12 % up to 15-16 %) Polluted groundwater, surface water Environmental monitoring system is weak Environmental management is not used by the companies Small rate of municipal green area
SSHR	Active civil sector High value of cultural and historical heritage Economic activity higher than national average, lower unemployment Favorable state of population's health Public functions and organizer power of cities is strong	Low number of complex (physical, social) rehabilitation programs High number of brown fields along the „energy axe" High number of settlements with no or weak civil services, difficult civil service organization due to settlement structure Depopulation and aging especially in small villages
TTI	Excellent quality of the drinking groundwater supply High rate of the dwellings attached to dictrict-heating The rate of the mechanically and biologically treated waste water is high Significant power generation in Dunaújváros High proportion of dwellings heated with gas Only renewable-based electricity generation	Underdeveloped connections of centers and peripheries. Possibilities of alternative accessibility is underdeveloped The role of railway transportation is decreasing, its infrastructure and services decline The road system of Budapest is overloaded weak environmental awareness water sources sensitive to contamination
E	Rising GDP/capita productivity Rising inflow of capital Developed infrastructure Developing middle and high level education system	Low production of building industry Undeveloped road and railway system, lack of bridges at important transport points Low productivity of tourism
GS	Opportunities	Threats
NC	Good agrarian ecological potential Selective waste collection Including environmental issues in county development plans Soil management, mainly at flood basins	Groundwater problems Bigger environmental load due to the transport (M8, M6, Dunahíd) Less demand for public transport Danube is more polluted
SSHR	Revaluing of the regional role of mid- and small towns Regional cooperation between vocational training, adults' education, higher education and R&D Growing willingness of universities for cooperation with enterprises in R&D Győr, Székesfehérvár, Budapest as development poles	Aging of small villages and Budapest, decreasing number of population in working age Segregation Situation and chances of roma people unsolved Brain drain to Western Europe Growing transportation demands of commuters
TTI	Development in renewable energy production (wind power) utilization of biomass, wind and solar energy potential the renewable energy based production could reduce the import dependence, the use of fossil fuels and greenhouse gas emission because the EU standards the programs to improve the quality of drinking water is significantly supported	Rate of individual transportation is growing reduce or eliminate the subsidy of alternative and/or specific technologies investment high dependence of imports (hydrocarbons) one-sided production structure centers in remote area – homestead – do not receive adequate support
E	New industrial facilities on the basis of existing concentrated industry (Technopolis project of Székesfehérvár, Dunaújváros,) Development of purpose-oriented training system, New agricultural products for export to the neighbor countries, New agricultural products by processing industry	Effects of no policy changes, arrears in regional competition Lack of development of transport system jeopardize important co-operations. Lot of development projects could be realized without KEM. The domination of multinational commercial chains jeopardize local economy One-sided, on foreign capital based development

The CDR No.6 Székesfehérvar-Dunaújváros-Kecskemét consists of two NUTS3 regions (Fejér and Bács-Kiskun County). Total area is 12824 km².

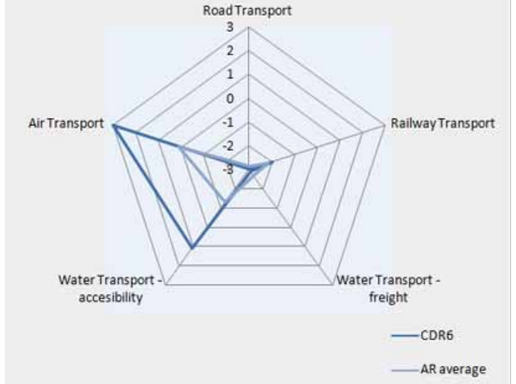
Graph 26



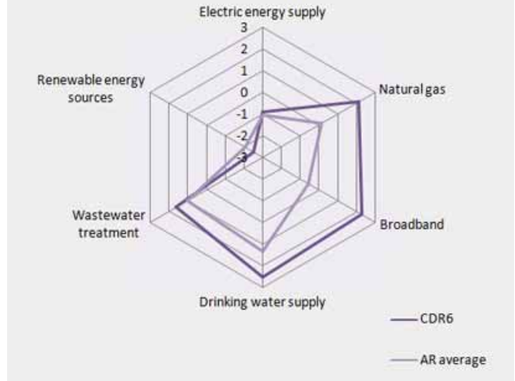
Graph 27



Graph 28



Graph 29



CDR Strategy

General Scheme: Natural Conditions

Global objective: Green production structure and appropriate water supply

SO 1: Low level of air pollution

P 1.1: Reduction of air pollution

M: mitigation of point wise sources, avoid exceeding limit values, built coherent green areas, review of air pollution action plans, stricter air quality control

SO 2: Low level pollution of ground water

P 2.1: Protection of surface water and groundwater

M: establish a water quality database, stop illegal land filling

SO 3: Loess wall and riverside wall protection

P 3.1: Protection of natural and built environment

M: controlled construction activities at loess surfaces, receive EU fund for loess wall and river bank wall protection, sustainable development at resort places (e.g.: Lake Velence)

SO 4: Good quality and appropriate amount of water

P 4.1: Water retention (Homokhátság)

M: establish complex water management system (inland water canals, water reservoirs), mitigate the climate change impacts on the Danube basin.

P 4.2: Decrease groundwater pollution

M: establish complex water management system (inland water canals, water reservoirs), mitigate the climate change impacts on the Danube basin, water pollution monitoring system, detect and eliminate landscape wounds, protection of groundwater based drinking water, flood protection.

SO 5: Pollution free soil

P 5.1: Environmental friendly land management

M: maintain and rehabilitate natural habits, riverside forest management, environmentally friendly agricultural systems, cross-border natural protection areas

Graph 26: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Successful, acknowledged, innovative area based on the network of co-operative settlements in an economic core area

SO 6: Innovative and competitive territorial structure

P 6.1: Increase the resilience of human resource

M: developing the institutions of higher education, increasing innovation capabilities, target oriented life-long and vocational training,

P 6.2: Developing community infrastructure

M: Improving language learning facilities, Improving community infrastructure by closing gap between dwellings supplied with water and sewage system.

SO 7: Balanced regional structure

P 7.1: Protecting and developing built environment

M: social employment programs for lagged regions, reconstruction of settlement, strengthening their population retaining capabilities.

SO 8: High level standard of living

P 8.1: Strengthening urban functions to increase polycentricity

M: Preservation and utilization of historical and cultural values, Strengthening local urban centers.

P 8.2: Establishing the conditions of e-government

M: Developing Internet accessibility.

SO 9: Sustainable rural communities

P 9.1: Establishing the conditions of sustainable rural

development

M: strengthening higher education institutions, target-oriented life-long learning and vocational training, stimulating language learning.

SO 10: Dynamic urban centers

P 10.1: Strengthening the role of urban centers

M: protection of farmsteads as special components of the local settlement system, social employment programs for lagged regions.

SO 11: Strong population retaining capacity

P 11.1: Bunch-like micro-regional development programs

M: Thermal and rural tourism development, co-operation for preserving natural and cultural heritages,

P 11.2: Strengthening regional and local identity and institutional

M: strengthening the institutions of social supply, supporting local health care modernization, improving the conditions of Internet accessibility.

Graph 27: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Effective, innovative, environmental-friendly infrastructure in the nodal region of international transport corridors

SO 12: Better state of urban environment

P 12.1: Wastewater utility development

M: sewage-network development, network upgrade, service recourse increase.

SO 13: Sustainable electricity production, energetic self-sufficiency

P 13.1: Alternative energy sources

M: building modernization, biomass and wind energy potential utilization, energy conservation and efficient energy improvements innovation, raising development for supply security.

SO 14: Advanced electronic services and digital skills

P 14.1: Digital literacy development

M: high-speed networks innovation, acquisition of the IKT application supporting courses.

P 14.2: Infrastructure expansion (broadband access)

M: IKT infrastructure development, increase wireless coverage, existence of basic services, creating new jobs within the IKT industry with the development of SMCs.

SO 15: Lower transport and energy usage

P 15.1: Alternate transport methods

M: coordinated, multi-modal public transport development, the construction of Vo suburban railway line improves traffic conditions, building port for passenger ships and yachts public shipping integration into the public transport system.

P 15.2: Development of transport infrastructure

M: building product-oriented trimodal ports, directing transit of goods to railway and ship, renewable energy production, new, specific supply chains.

SO 16: Greater role of Danube in the division of transport labor

P 16.1: Quality vocational training

M: serving the building and vehicle manufacturing with facilities and producing equipments, developing program of Regional Integrated Vocational Training Centers, two- and three-sided international co-operations.

Graph 28: T indicators status in 2020
Graph 29: TI indicators status in 2020

General Scheme: Economy

Global objective: Developed Industrial-oriented rural industry and Green Economy

SO 17 : High purchase power

P 17.1: Multi-polar industry development

M: Development of local economy to build up a multi-polar system, home building program for new condominium, development of purpose-oriented training system

SO 18: High productive and energy saving building stock

P 18.1: Multi-level industry development

M: agricultural-industrial cluster programs, new industrial and logistic facilities on the base of existing concentration, complex energy saving remodeling program of housing estates, support the agricultural based renewal energy production,

supporting the herbs production and herbs processing industry, cluster, based on new industrial concentration.

SO 19: Develop logistical region

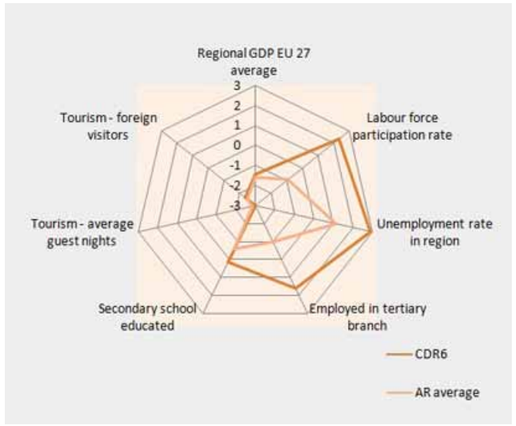
P 19.1: Attractive environment

M: touristic cluster and new attractions around Lake Velence to have a longer season, PPP research program on the basis of existing industrial concentration.

SO 20: High anticipation of work force and low unemployment

P 20.1: Purpose oriented training programs

Graph 30



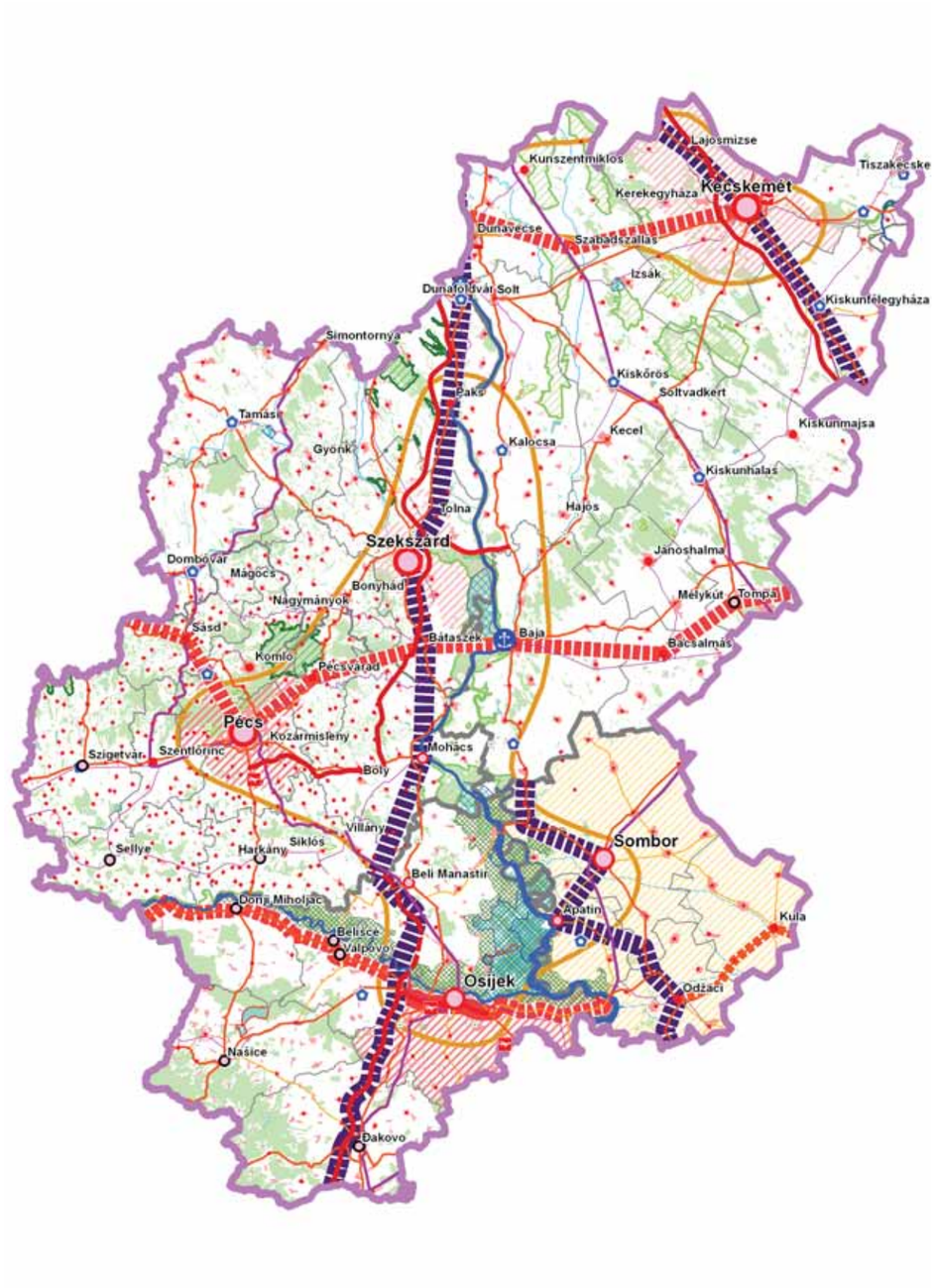
M: agricultural-industrial purpose oriented training programs, new services of schools (courses, advices etc.), complex pedagogic programs from 3 year age

SO 21: New agricultural branches and distributing system

P 21.1: Integrated development of tourism

M: renewal of brown fields and unused military areas, supporting new Hungaricums, building up local distributing trade system, research of new agricultural products and technologies.

Graph 30: E indicators status in 2020

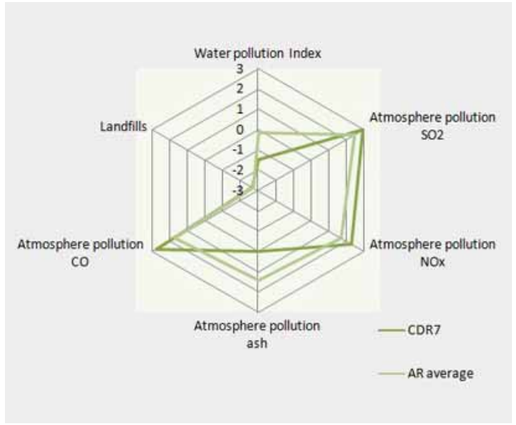


SWOT analysis

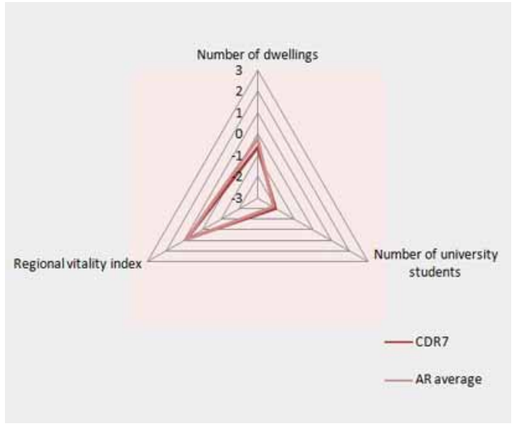
GS	Strengths	Weaknesses
NC	Preserved bio and landscape diversity and natural resources (natural reserves, protected areas) Large areas of valuable arable land and forests Plenty of water sources Mineral resources (urane ore, coal , limestone , clay, sand, gravel)	Underdeveloped mechanisms for environmental monitoring Existent sources of environment pollution (water, soil, air) Underdeveloped sewage, wastewater treatment systems and waste management/disposal
SSHR	Favourabla position at communication axes of international and national importance Polycentric settlement system with medium and small urban centres Cultural and natural heritages of international and national importance	Peripheral position related to regional, national and international centers ; Functional deficiencies of micro regional centers; Ageing and decreasing population; Outmigration and brain-drain; High share small settlements lagging behind;
TTI	Excellent geographical position for logistics and good accessibility Existing transport infrastructure for all means Elaborated spatial development plans Well developed electric and gas pipeline network	Poor state of existing railroad network and 2nd class roads Multimodal transport infrastructure underdeveloped Insufficient use of waterways Lack of agricultural irrigation systems
E	Dominance of agriculture and processing industry Qualified labour force in traditional industrial sectors Entrepreneurship support institutions Industrial centers, zones, clusters, and business centers	Low level of competitiveness of major economy branches Low share of high-tech manufacturing and services based on knowledge Limited financial sources focused on modernization and creation new technologies
GS	Opportunities	Threats
NC	RAMSAR and NATURA 2000 support schemes Implementation of international and national biodiversity preservation and forestation programs Increasing interest for selective types of tourism Growing demand for organic products	Uncontrolled exploitation of forests and other natural resources Technological failures and accidents in production procecces and waste management Natural hazards (floods, droughts, fires, earthquakes) Water quality problems at some places
SSHR	Access to EU support for cross-border co-operation in HR , rural and urban economic development Growing EU interest towards the Balkan region Polycentric settlement development policy	Outmigration and brain drain Cheap labor oriented development policy Demographic and social erosion; Insufficient population policy incentive measures
TTI	EU support for the development of EU transportation corridors River transportation possibilities Internationally growing importance of water resource management EU requirements of the 20-20-20 % target of energy policy	Reducing public investments in transport and public infrastructure due to economic crisis Lack of maintenance of existing infrastructure due to lack of funds Increasing energy dependency and energy prices Uneven and uncoordinated contruction
E	Finalization of agricultural products with higher added value Cross-border co-operation in various economy sectors High potential for agricultural production and food industries EU and national support in HR development	Economic stagnation and/or durable crisis Short-term oriented economic and regional policies Increased competition in agricultural and processing Low investments to R&D activities Insufficient absorption of European and national funds Outflow of qualified labor force (brain-drain) High cost of capital

The CDR No.7 Pécs - Szekszárd - Baja - Osijek - Sombor lies on the territory of three countries (Hungary, Croatia and Serbia). It consists of five NUTS3 regions (Baranya Tolna and Bács-Kiskun counties, Osječko-baranjska county and Zapadnobačka oblast). Total area is 23 169 km².

Graph 31



Graph 32



CDR Strategy

General Scheme: Natural Conditions

Global objective: Valorization of natural values of the region

SO 1: Good condition of waters

P 1.1: Decreasing water contamination

M: reduction of river pollution sources; increase the scope of national parks and other protected areas; cross-border natural protected areas; water resources protection; improvement of drainage system and waste water treatment system.

P 1.2: Increasing the water level

M: complex water management plans; establishment of complex water managagement system (inland water canals, water reservoirs; protection of groundwater drinking water).

SO 2: Establishment of regional waste management system

P 2.1: Closing of illegal landfill sites

M: raising awareness on environment values and issues in the region; a complete - integrated waste management system construction (centre of waste management, transfer stations, recycling yards.

SO 3: Uncontaminated soil

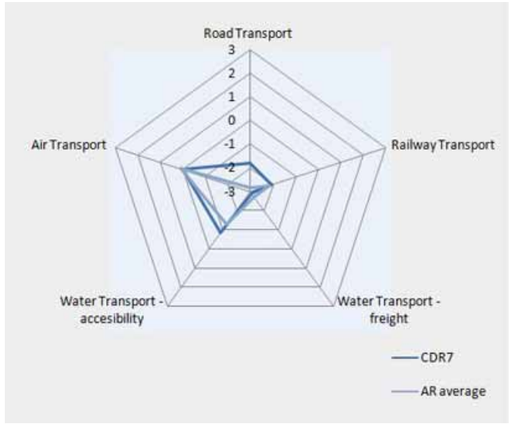
P 3.1: Surveying and remediation of mines

M: Demining pursuant to the human demining priorities.

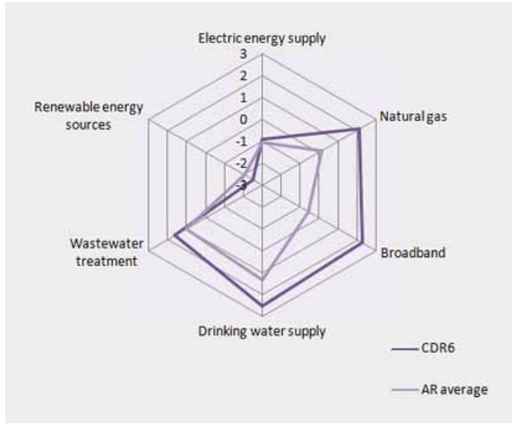
P 3.2: Land-use planning

M: improvement of environmental quality monitoring system; establishment and improvement of spatial planning information system based on GIS technologies; creation of system support to Local Action Groups and implementation of LEADER approach; demining pursuant to the human demining priorities.

Graph 33



Graph 34



SO 4: Diverse ecosystems

P 4.1: Habitat conservatory

M: improvement of environmental quality monitoring system; raising awareness on environment values and issues in the region; soil resources protection; co-operation for preserving natural and cultural heritages; valorization of biodiversity and its use in marketing of the territory; demining pursuant to the human demining priorities.

Graph 31: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Increase the ability to keep the population in a polycentric settlement system

SO 5: Balanced urban-rural development

P 5.1: Strengthening the role of small cities

M: Strengthening the functions of regional centres; infrastructural and human development of public services; establishing professional regional development and management agencies/offices; regional marketing activity; improving the conditions of Internet accessibility; construction and improvement of road and rail infrastructure.

P 5.2: Rural development

M: Renewal of rural and urban settlements - economic, physical and social renewal of rural settlements as the base for ending the process of depopulation in rural; creation of system support to Local Action Groups and implementation of LEADER approach; agricultural-industrial cluster programs and training programs; protection of farmsteads.

SO 6: Increase population ability for adaptation

P 6.1: Life-long learning

M: IT networks delivery in underserved areas; construction and improvement of the electronic communication network; improving the conditions of Internet accessibility; target oriented LL learning and vocational training; strengthening co-operation between higher education and regional economy; stimulating language learning.

P 6.2: Developing new employment opportunities

M: Establishment of bonds between economic, scientific and development institutions; stimulating language learning; development of purpose-oriented training system; IT networks delivery in underserved areas; target oriented LL learning and vocational training; strengthening co-operation between higher education and regional economy.

SO 7: Increase quality of life

P 7.1: Active population policy

M: Infrastructural and human development of public services; improving health-care supply; improvement of preschool, primary and secondary school education; developing territorial social service network; support for activities contributing to the life quality improvement of young people.

P 7.2: Priority 3.2: Increase accessibility and quality of public services

M: Improvement of preschool, primary and secondary school education; infrastructural and human development of public services; development of purpose-oriented training system; IT networks delivery in underserved areas; strengthening co-operation between higher education and regional economy.

Graph 32: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Ensure the quality services with developed accessibility

SO 8: Increase accesibility and decrease time to reach destination

P 8.1: Development of corridors

M: Reconstruction and construction of sections of corridors 5, 8, 10; establishment and improvement of spatial planning information system based on GIS technologies; construction and improvement of road and railroad infrastructure.

P 8.2: Establishment of missing transport axes

M: Reconstruction and construction of sections of corridors 5, 8, 10; construction and improvement of road and railroad infrastructure

P 8.3: Development of inland water-ways

M: Development of advanced transport models - integrated transport, multimodal transport and combined transport; directing transit of goods to railway and ship; reconstruction and modernization of existing ports; construction and improvement of waterway system and revalorization of Danube and Drava as international routes.

SO 9: Energy efficient systems

P 9.1: Renewable and green energy utilization

M: Mitigate the climate change impacts on the Danube basin; biomass, solar energy, geothermal potential utilization; wind-water power, etc.; stimulation of environment-friendly economic activities; support to agriculture based renewable energy production.

SO 10: High level IT network

P 10.1: Improvement of IT infrastructure and services

M: Networks delivery in underserved areas; ICT infrastructure development; increase wireless coverage, construction and improvement of the electronic communic. network for data, voice, video transmission.

SO 11: Clean water base

P 11.1: Waste-water cleaning

M: Improvement of environmental quality monitoring system; water management plans; reduction of river pollution sources improvement of drainage system and waste water treatment system; water resources protection.

Graph 33: T indicators status in 2020
Graph 34: TI indicators status in 2020

General Scheme: Economy

Global objective: Prosperous region

SO 12: Increase of competitiveness of economy in the region

P 12.1: Investment attraction

M: Systematic attraction and support to investors; support for the development of SMEs; clustering companies according to the allocation of resources and transportation networks; establishment of bonds between economic, scientific and development institutions; stimulating language learning; improving the conditions of Internet accessibility; target oriented life-long learning and vocational training.

P12.2: Facilitating entrepreneurship development

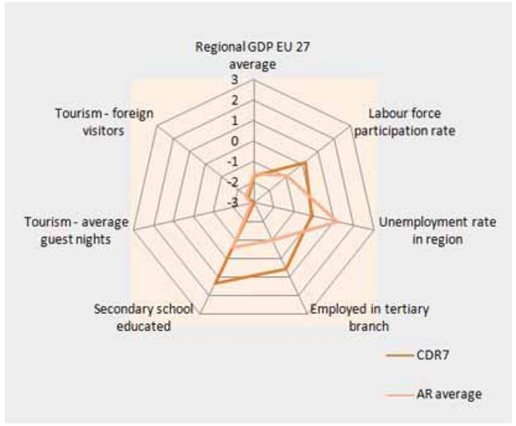
M: Support for the development of SMEs; establishment of bonds between economic, scientific and development institutions; improving the conditions of Internet accessibility; target oriented life-long learning and vocational training; support for exporters and companies with export potential; strengthening co-operation between higher education and regional economy.

SO 13: Increase employment

P 13.1: Matching educational system to needs of regional economy

M: Development and adjustment of the education system to the economy needs; establishment of bonds between economic, scientific and development institutions; target oriented life-long learning and vocational training.

Graph 35



SO 14: Increase diversification of activities and competitiveness and in rural areas

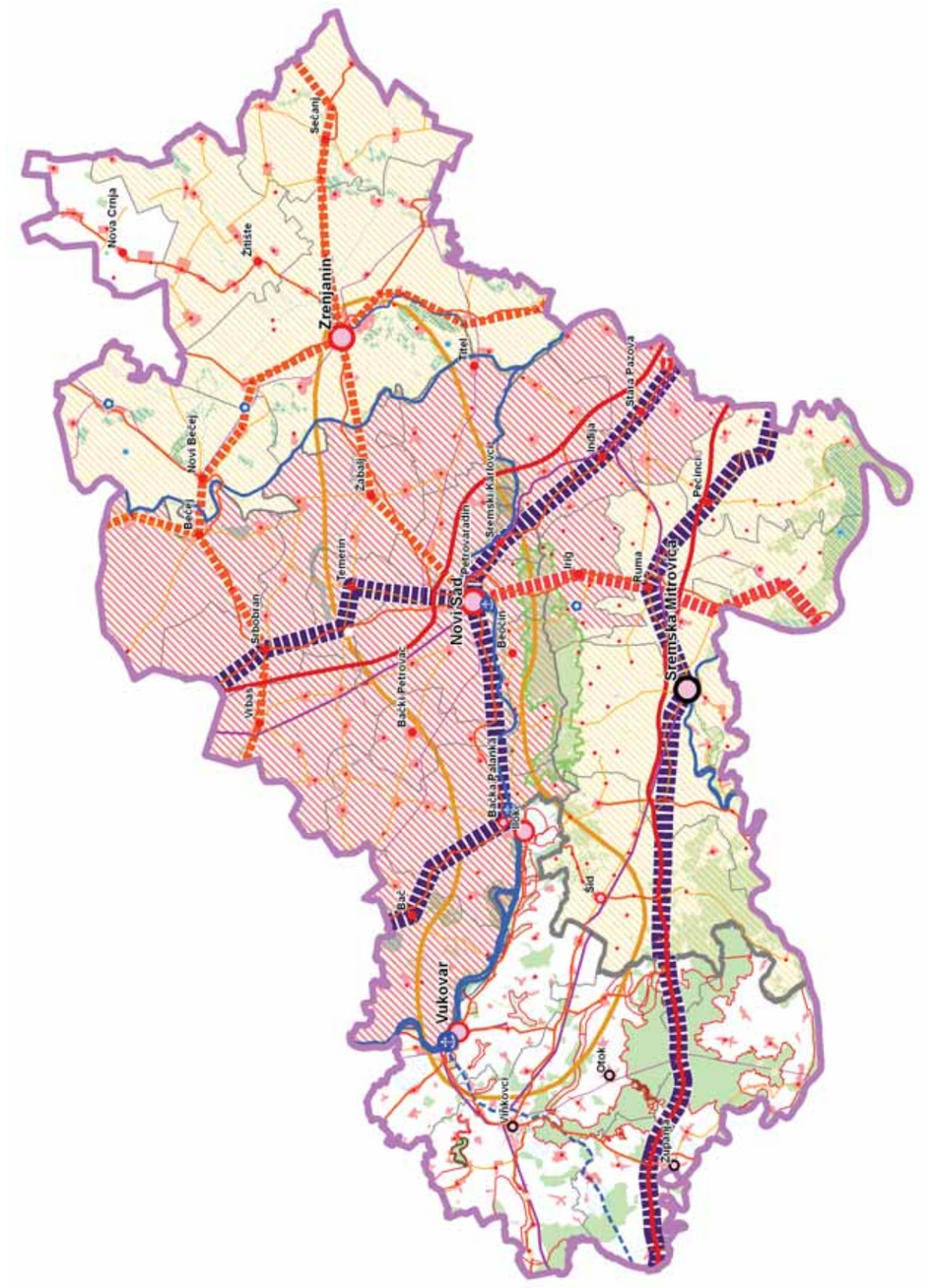
P 14.1: Sustainable agriculture

M: Creation of system support to Local Action Groups and implementation of LEADER approach; agricultural-industrial cluster programs and training programs; development of local economy multipolar system; building of local distribution and trade system; development of purpose-oriented training system; establishment of bonds between economic, scientific and development institutions.

P 14.2: Development of rural tourism and special forms of tourism

M: Valorization of biodiversity and its use in marketing of the territory; cultural-program tourism; development of touristic clusters; construction and improvement of wine roads; local and regional cultural events; tourism infrastructure development; internet accessibility; co-operation for preserving cultural heritages; regional marketing activity; promotion of touristic potentials.

Graph 35: Economy indicators status in 2020

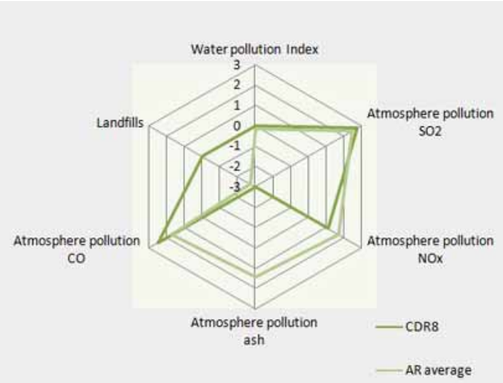


SWOT analysis

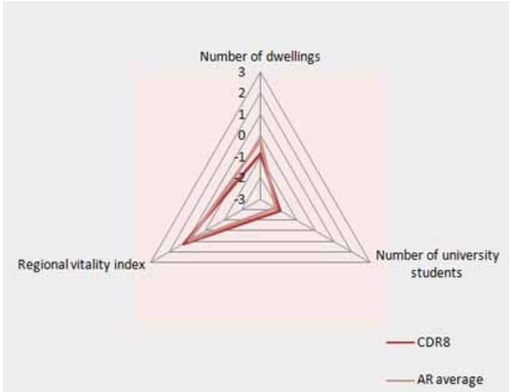
GS	Strengths	Weaknesses
NC	Preserved bio and landscape diversity and natural resources Large areas of particularly valuable agricultural and arable land with great opportunities for irrigation Plenty of water resources (drinking water, thermal and mineral waters)	Significant area under mines in Vukovar-Srijem County NATURA 2000 not yet established in Serbia and Croatia Lack of management and implementation capacities for environmental protection at local level Industry as significant air pollution source (Refinery in Novi Sad, ciment factories etc)
SSHR	Developed settlement network with relatively high polycentric characteristics Trans-European transport corridors Multicultural communities Developed Cross-Border Cooperation trough EU funds and programmes	Outmigration and brain-drain (on Serbian part with exception of the area of Novi Sad) Ageing and unfavourable age strucrture Urban sprawl in the agglomeration of Novi Sad Social segregation Low level of education and skills;
TTI	Three pan-European corridors (Vc, X and Xb and VII) Motorways and E-roads (E 70, E 73, E 75) International railroads (E 70, E 85) Developed network of 1st and 2nd class roads Biomass potential in energy production Broadband internet getting stronger	Bad quality of the road network Poor state of the existing railroad network in Serbian part of the CDR Low share of public transportation High share of individual transport Insufficient use of waterways, existing ports and bad conection of the Danube and Sava
E	Traditionally, a relatively developed crafts and SME The existence of support institutions in entrepreneurship and private initiatives High potential for agricultural production and food industries	Lack of tourist valorization of cultural heritage Low level of innovation and collaboration with research and development Highg share of grey economy Low level of investment in the economy, especially in export manufacturing
GS	Opportunities	Threats
NC	Possibility of identification of NATURA 2000 areas Enrollment of the protected area of Obedska bara pond in the MAB list (Sremska oblast) Construction of 2 regional landfills for hazardous waste (in Južnobačka and Srednjobanatska oblast)	Non-implementation of laws regulating environment protection, construction and ambiance preservation Climate changes The transfer of pollution from the environment (water, air) Flood risk
SSHR	Polycentric industrial development EU support for multicultural communities EU support for Cross-Border Cooperation Re-vitalization of rural settlements	Outmigration and brain drain Demographic (aging) and social erosion Further urban sprawl around Novi Sad Increase in unemployment
TTI	EU support for the development of EU transportation corridors Expansion of electronic and communication infrastructure; E-public services	Reducing public investments in transport and public infrastructure due to economic crisis Natural disasters Different technical standards
E	Promotion of partnerships between education institutions and business institutions Increasing the number of foreign investments Intensive utilization of touristic possibilities	Macroeconomic instability High political risk, corruption and gray economy in the Serbian part of the CDR Outflow of qualified labour force

The CDR No.8: Vukovar- Novi Sad consists of four NUTS3 regions (Južnobačka oblast, Srednjobanatska oblast, Sremska oblast and Vukovarsko-srijemska županija). Total area is 13 228 km².

Graph 36



Graph 37



CDR Strategy

General Scheme: Natural Conditions

Global objective: Stabilized environment system

SO 1: Quality of waters

P 1.1: Decreasing water contamination

M: reduction of river pollution sources; increase the scope of national parks and other protected areas; cross-border natural protected areas; water resources protection; improvement of drainage system and waste water treatment system.

P 1.2: Protection of water sources

M: Establishing all three protective zones; prevention of illegal construction in underground water sources areas

SO 2: Environment protection

P 2.1: Air quality improvement

M: Reduction of the emission of the polluting materials from industry, traffic and other sources; air monitoring system development

P 2.2: Protection of agricultural land (as natural resource)

M: Change of the law on agricultural land and its implementation

SO 3: Waste management system development

P 3.1: Improvement of the waste management

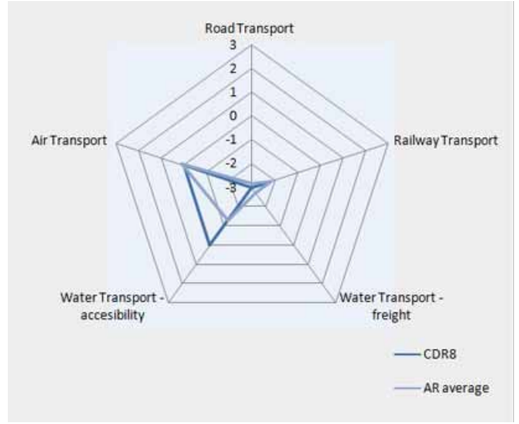
M: Closing, repairing and remediation of current dumps in all communities; waste management centres construction

P 3.2: Closing of illegal landfill sites

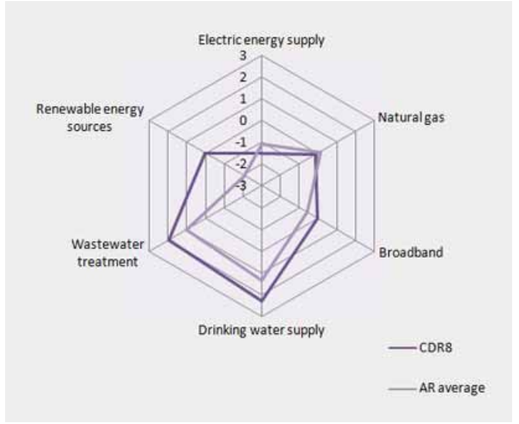
M: raising awareness on environment values and issues in the region; a complete - integrated waste management system construction (centre of waste management, transfer stations, recycling yards, etc .

Graph 36: Natural Conditions indicators status in 2020

Graph 38



Graph 39



General Scheme: Settlement Structure and Human Resources

Global objective: Polycentric settlement system development

SO 4: Polycentric system development

P 4.1: Strengthening the role of towns

M: Decentralization of functions and comprehensive planning; Strengthening the functions of regional centres; development of spatial organization and distribution of centres and public functions, establishing professional regional development and management agencies.

P 4.2: Rural development

M: Renewal of rural and urban settlements - economic, physical and social renewal of rural settlements as the base for ending the process of depopulation in rural; creation of system support to Local Action Groups, agricultural-industrial cluster programs and training programs; protection of farmsteads.

SO 5: Population development

P 5.1: Reversing negative population trends

M: Economic, physical and social renewal of rural settlements and smaller towns; improving utility and other services.

P 5.2: Life-long learning

M: IT networks delivery in underserved areas; construction and improvement of the electronic communication network; improving the conditions of Internet accessibility; target oriented LL learning and vocational training; strengthening co-operation between higher education and regional economy; stimulating language learning.

Graph 37: Settlement Structure and Human Resources indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Good accessibility of the region and environmentally friendly technical infrastructure

SO 6: Transport system development

P 6.1: Development of corridors

M: Reconstruction and construction of sections of corridors; establishment and improvement of spatial planning information system based on GIS technologies; construction and improvement of road and railroad infrastructure.

P 6.2: Reconstruction and development of the railroad network

M: Restoration and modernization of main railroads; Construction of railway junctions by connecting intermodal logistic railway centres with road, air and river traffic; reconstruction and modernization of the railway stations

P 6.3: Development of waterborne transport

M: Minimizing administrative, technical and legal obstacles; establishment of the Port Authority; popularization of waterborne transport and education of new staff; reconstruction and modernization of public ports/terminals

P 6.4: Building multimodal/intermodal transportation system

M: Introducing intermodal transport, Ro-Ro transport; establishing logistics platform; forming potential intermodal terminals and logistics centres

Graph 38: Transport indicators status in 2020

SO 7: Energy supply and RES development

P 7.1: Reliable generation and distribution of electric energy

M: Reconstruction of electric substations, Increased supply security, New transmission lines

P 7.2: Developing facilities for the use of RES

M: Construction of wind farms and wind turbines in the municipalities; creating national action plan for the use of biomass

SO 8: Development of Information Society

P 8.1: Improvement of IT infrastructure and services

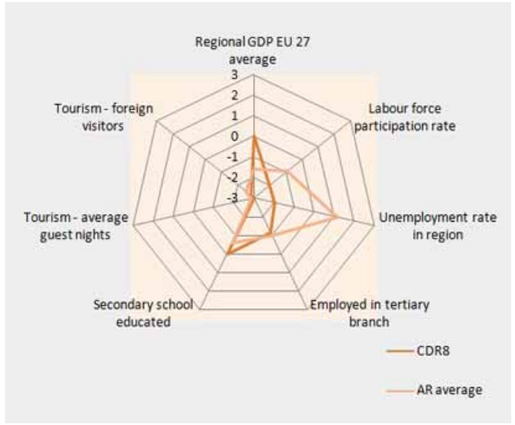
M: High speed networks innovation; Support of wider broadband access especially in rural parts of region, ICT infrastructure development; increase wireless coverage

SO 9: Development of drinking water supply and waste water systems

P 9.1: Water Supply development

M: Water Supply development, Development of water supply networks; Water supply systems interconnections

Graph 40



P 9.2: Wastewater treatment development

M Supporting wastewater treatment technologies, Wastewater collection and treatment systems of agglomerations:

Graph 39: Technical Infrastructure indicators status in 2020

General Scheme: Economy

Global objective: Competitive economic environment

SO 10: Competitiveness of economy

P 10.1: Investment attraction

M: Systematic attraction and support to investors; support for the development of SMEs; support of R&D, scientific institutions development; stimulating language learning; target oriented life-long learning and vocational training

SO 11: Labour market development

P 11.1: Matching educational system to needs of regional economy

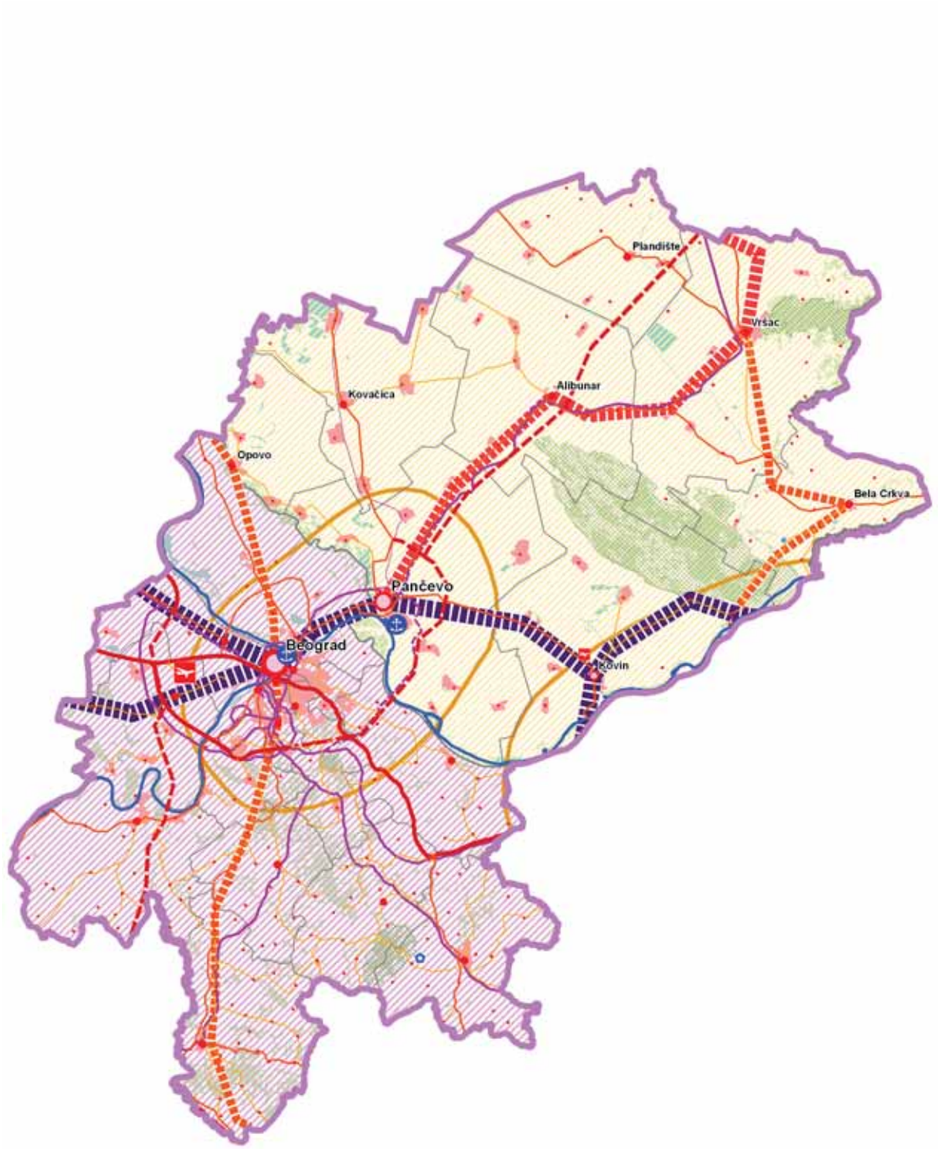
M: Development and adjustment of the education system to the economy needs; establishment of bonds between economic, scientific and development institutions; target oriented life-long learning and vocational training.

SO 12: Increase diversification of activities and competitiveness and in rural areas

P 12.1: Sustainable agriculture

M: Creation of system support to Local Action Groups and implementation of LEADER approach; agricultural-industrial cluster programs and training programs; development of local economy multipolar system; building of local distribution and trade system; development of purpose-oriented training system; establishment of bonds between economic, scientific and development institutions

Graph 40: Economy indicators status in 2020

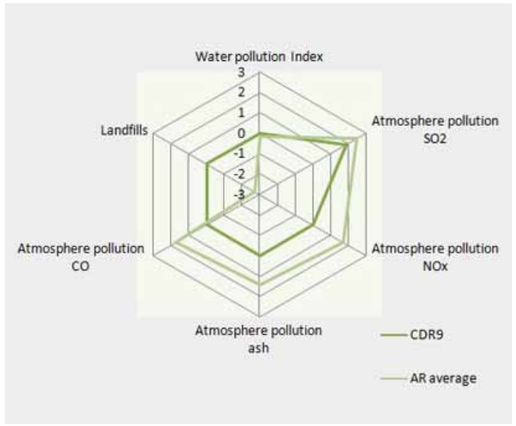


SWOT analysis

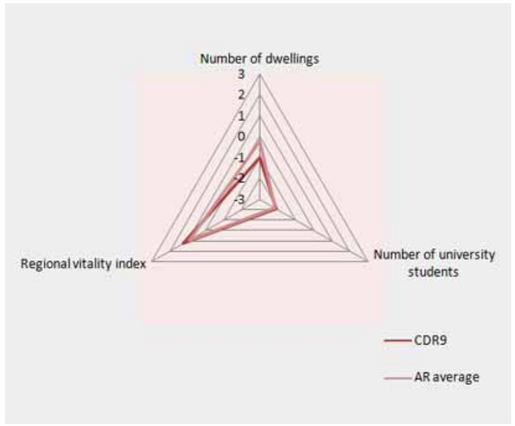
GS	Strengths	Weaknesses
NC	Several international ecological corridors: the Danube, Sava and Tamiš River High share of protected areas in Južnobanatska oblast Spa Selters of national importance in Beogradska oblast	Very small share of protected natural heritage in Beogradska oblast NATURA 2000 is not established yet Large air pollution sources Inappropriate waste collection, transport and storage
SSHR	Constant population growth in Beogradska oblast (due to in-migration) High urbanization rate in Beogradska oblast Bothe Belgrade and Pančevo are among the biggest industrial centres in Serbia	Negative natural population growth in both NUTS3 regions Unfavourable age structure and declining vitality index Brain-drain Gaps between administrative organisation and functional links between Pančevo and Belgrade
TTI	Crossing of two international multimodal corridors Two constructed motorways and one more planned Belgrade Airport of international importance Biggest thermal power plants in the country Natural gas production and distribution, oil refinery and distribution	Inappropriate technical level of railroad network in both counties Traffic jams in and around the City of Belgrade Insufficient RES production in both regions No long distance or regional drinking water and sewage system No waste water treatment
E	Beogradska oblast has the highest GDP per capita in Serbia whereas Južnobanatska oblast has the third highest GDP per capita in comparison with other Serbian Danube regions Beogradska oblast has the highest employment rate in the Serbian part of the Danube region	Decreasing number of employed and high unemployment rates in Južnobanatska oblast Small number of institutes of higher education and slow increase in highly educated population in Južnobanatska oblast Weak entrepreneurship culture in both regions
GS	Opportunities	Threats
NC	Possibility of identification of NATURA 2000 areas Enrollment of Deliblatska Peščara in the UNESCO World Heritage List	Traffic as the source of air pollution Inappropriate waste management Lack of funding for nature protection and environment Natural disasters (floods, etc)
SSHR	Stronger international position of Beogradska oblast in all fields Better administrative integration of Pančevo and Belgrade Better functional integration of Vršac and Timisoara	Further worsening of the age structure Further urban sprawl in Beogradska oblast Continual brain drain from Beogradska oblast Hyper concentration of inhabitants in Belgrade city and depopulation of other settlements
TTI	Development of Belgrade logistic platform along the axis Belgrade - Pančevo - Smederevo Alibunar (wind farms and wind turbines) Reconstruction of water-protection infrastructure Reconstruction, expansion and modernization of sewage networks	Reducing public investments in transport infrastructure due to economic crises and political situation Reducing investments in reconstruction of water-protection infrastructure Further congestions in Beogradska oblast in and around Belgrade
E	Further development of high education, R&D and Science&Technology in Beogradska oblast Investments in brownfields in both counties Development of diverse tourist offer in Beogradska oblast	Increase in unemployment Conversion of agricultural to construction land in Polarization of investments towards Belgrade Prolonged global economic crisis Macroeconomic instability

The CDR No. 09 Belgrade - Pančevo lies on the terrirory of Serbia. It consists of two NUTS3 regions (Beogradska oblast and Južnobanatska oblast). Total area is 8 472 km².

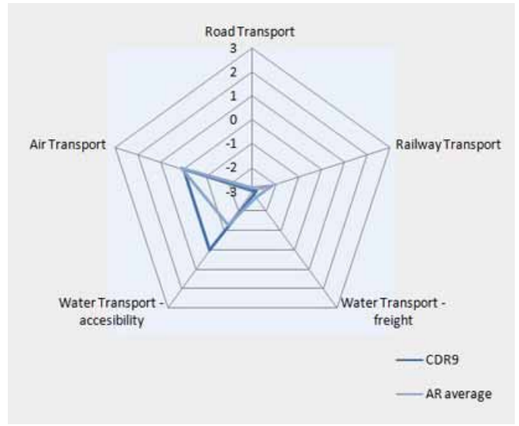
Graph 41



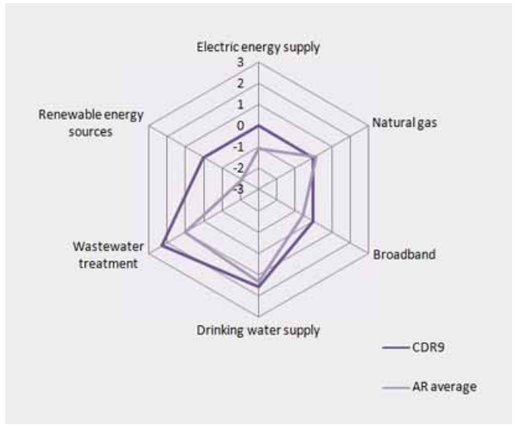
Graph 42



Graph 43



Graph 44



CDR Strategy

General Scheme: Natural Conditions

Global objective: Quality environment

SO 1: Increasing the share of protected areas

P 1.1: Increasing total area under protection

M: Proclamation of new protected areas (Karaš-Nera, Potamišje); revision of the status of previously designated protected areas (Natural park Ponjavica and Natural Park Jegrička); enrolling Jegrička and Potamišje to the Ramsar List; preparing documentation for enrolling Deliblatska Peščara to the Biosphere Reserves List, enrolling Deliblatska peščara to the UNESCO Worls Heritage list; establishing the National Ecological Network (NEN) and NATURA 2000; establishing an information system on protected areas

SO 2: Prevention of the degradation of natural resources

P 2.1: Protection of agricultural land (as natural resource)

M: Change of the law on agricultural land and its implementation

SO 3: Protection and improvement of the environment

P 3.1: Air quality improvement and the reduction of the emission of air pollutants

M: Reduction of the emission of the polluting materials from industry, traffic and other sources; building of the plant for desulphation and denitrification in thermal power plants, and implementation of new or reconstruction of current electro filters in plants which emit suspended particles above emission limit value (ELV) and which present the biggest risk for the environment and health; Extension and modernization of the network for air monitoring

P 3.2: Improvement of water quality

M: Definition of the Water Management Plan for the Danube River (ICPDR); construction of WTP of general type for every settlement with more than 5000 EI; construction of WTPs in connection to industries; establishing an emission monitoring network for waste waters

P 3.3: Improvement of the waste management

M: Closing, repairing and remediation of current dumps in all communities; construction of regional waste management centres in Pančevo and Belgrade

SO 4: Improving water management

P 4.1: Protection of water sources

M: Establishing all three protective zones; prevention of illegal construction in underground water sources areas

Graph 41: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Improved demographic situation and polycentric structure (in the context of Belgrade MEGA)

SO 5: Demographic recovery, especially in Južnobanatska oblast

P 5.1: Reversing negative population trends, especially in Južnobanatska oblast

M: Economic, physical and social renewal of rural settlements and smaller towns; improving utility and other services.

P 5.2: Improving education structure, especially in Južnobanatska oblast

M: The adaptation of education system to the economic needs.

SO 6: Strengthening polycentric structure and functions, especially in Beogradska oblast

P 6.1: Strengthening the role of towns

M: Decentralization of functions and comprehensive planning within MEGA and FUA; monitoring of spatial phenomena and processes within MEGA and FUA; development of spatial organization and distribution of centres and public functions.

graph 42: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Efficient and integrated transport system, quality and environmentally friendly technical infrastructure

SO 7: Efficient and integrated transport system

P 7.1: Reconstruction and development of the road network

M: Extension of E-70 highway: (Belgrade) - Pančevo - Vršac - border with Romania; construction of E-763 Belgrade – (Čačak – Požega – Arilje – Ivanjica – Sjenica - Boljare / border with Montenegro); reconstruction and termination of M24; completion of the Belgrade bypass (sections A, B5, B6) within Corridor X, subsequent construction of section C (Bubanj Potok - Boleč - Starčevo - Pančevo east - Pančevo north) and construction of bypass Vršac; solving the problem of bottlenecks, such as the bridges on Sava and the Danube in the Belgrade area.

P 7.2: Reconstruction and development of the railroad network

M: Restoration and modernization of main railroads:

E 70: Belgrade - (Stara Pazova - Šid - state border / Tovarnik); E-85: Belgrade - (Stara Pazova - Novi Sad - Subotica - state border / Kelebija); E70 and E 85: Belgrade -(Niš); E 66: Belgrade - Vršac, and of the regional railroad Pančevo - (Zrenjanin - Kikinda - state border); construction of new railroads Beli Potok - Vinča - bridge over the Danube - Pančevo and Belgrade - Obrenovac - Šabac; Construction of railway junctions in Belgrade by connecting intermodal logistic railway centres with road, air and river traffic; reconstruction and modernization of the railway station in Pančevo

P 7.3: Development of waterborne transport

M: Minimizing administrative, technical and legal obstacles; establishment of the Port Authority; popularization of waterborne transport and education of new staff; Ensuring continual functioning of Sava international waterway throughout the year; reconstruction and modernization of public ports/terminals of state importance (Belgrade and Pančevo)

P 7.4: Further development of air transport and operations

M: Expansion and modernisation of Belgrade international airport „Nikola Tesla“ Belgrade for the eventual handling of 3.5 million passengers annually; construction of cargo centre at the Belgrade airport, with the capacity of 500,000 tons and a duty free zone; modernization and expansion of regional airport in Vršac; modernization and expansion of sports, training and agricultural airports in Pančevo, Bela Crkva

P 7.5: Building multimodal/intermodal transportation system

M: Introducing intermodal transport, containerisation, Ro-Ro transport, river to sea traffic, etc; establishing logistics platform Belgrade-Pančevo-Kovin-Smederevo; forming potential intermodal terminals and logistics centres in: Belgrade, Pančevo and Vršac

Graph 43: T indicators status in 2020

SO 8: Reliable energy supply and increased use of RES

P 8.1: Reliable generation and distribution of electric energy

M: Reconstruction of electric substation TS 400/220 kV Belgrade 8, TS Obrenovac, TS Pančevo 2, TS 220/110 kVBelgrade 3 and TS 220/110 kV Belgrade 5, electricity trunks of 400kV, Belgrade 8-Pančevo and 220 kV Belgrade 8 – HI Pančevo (the part on the Danube), TS 110/35/10 kV Belgrade 1 and TS 110/35 kV Pančevo 1, trunks of 110 kV Belgrade 3– Kostolac, 110 kV Belgrade 2–Belgrade 35, 110 kV Belgrade 2 – Belgrade 22; expansion of existing trunk 110 kV Belgrade – Stara Pazova; construction of trunks TS 400/110kV Belgrade 20 and introduction of trunks of 400kV and 110kV, 2 x 400kV Pančevo-Resita (Romania), new trunks 110 kV Belgrade 1– Belgrade 28 and 110 kV Veliko Gradište – Bela Crkva, new TS 110/x kV Pančevo 5, TS 110/x kV: Autokomanda Belgrade, Grocka, Surčin, Pančevo 5 and Železnik

P 8.2: Developing facilities for the use of RES

M: Construction of wind farms and wind turbines in the municipalities of Bela Crkva, Kovin and Alibunar; creating national action plan for the use of biomass

P 8.3: Further expansion of the gas network

M: Ensuring funds from the public enterprise “Srbijagas” for the further implementation of gasification program in the Republic of Serbia; construction of “South stream” gas pipeline and the implementation of gasification program; further exploitation of the major gas fields in Južnobanatska oblast

SO 9: Development of Information Society

P 9.1: Development of telecommunication network and Internet

M: Expansion of broadband; improving access to the Internet, especially in rural areas

SO 10: Expansion of drinking water supply and waste water systems

P 10.1: Expansion of public drinking water network

M Construction of Belgrade and Južnobanatski regional water supply systems

P 10.2: Expansion of public sewerage networks and wastewater treatment

M Reconstruction, expansion and modernization of sewage networks; construction of WTP of general type for every settlement with more than 5000 EI

Graph 44: TI indicators status in 2020

General Scheme: Economy

Global objective: Competitive economy

SO 11: Consolidated and competitive economic sectors

P 11.1: Consolidated agriculture

M: Change of the law on agricultural land and its implementation; diversification of agricultural production and creation of agricultural-industrial parks; increasing the quality of agricultural products; development of fishery

P 11.2: Consolidated and strong industry

M: Development of industrial zones in Beogradska oblast according to the Spatial Plan of Serbia 2010-2020, as well as in Vršac and Bela Crkva; development of the Cross-Danube industrial park Smederevo-Kovin; activation of brownfields; introduction of new technologies and technical innovations; oil extraction in Kovin-Požarevac area

P 11.3: Quality services

M: Support for the development of SMEs; clustering companies according to the allocation of resources and transportation networks; taking advantage of the concentration of human resources, know-how and infrastructure in the capital city; investing in R&D; cooperation between companies and scientific and education institutions.

P 11.4: Profiled tourist offer

M: Valorisation of existent potentials (capital city and its position on two international rivers, natural and cultural heritage, etc); further development of the tourist offer (congress tourism, cognitive tourism, cultural tourism and international festivals, natural values, recreational and nautical tourism, agro-tourism, traditions.)

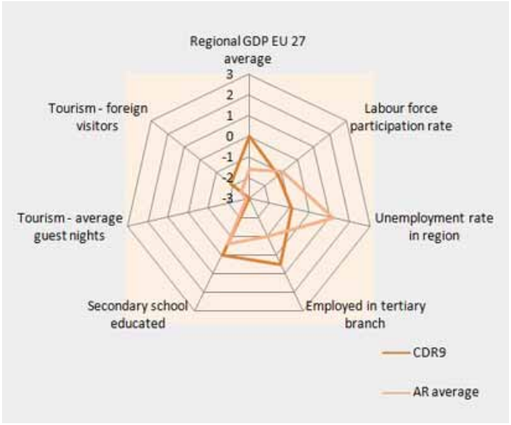
SO 12: Attractive labour market

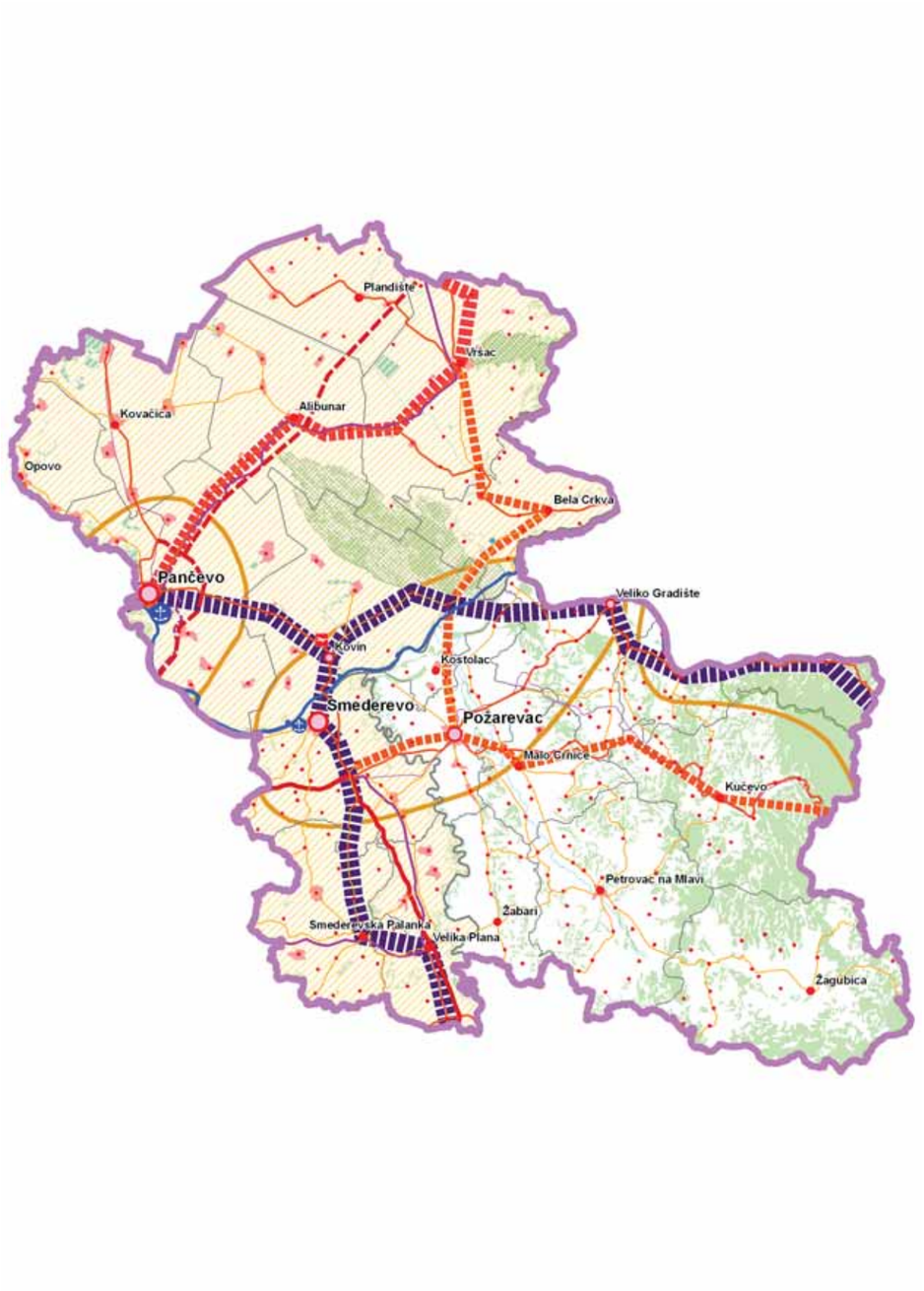
P 12.1: Qualified labour force

M: The adaptation of education system to the economic needs; investing in R&D and science and technology; cooperation between companies and education and scientific institutions.

Graph 45: E indicators status in 2020

Graph 45



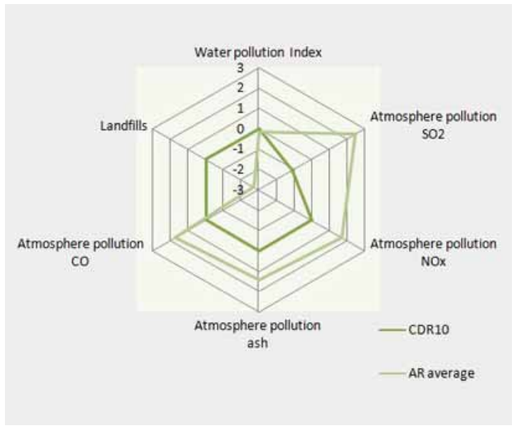


SWOT analysis

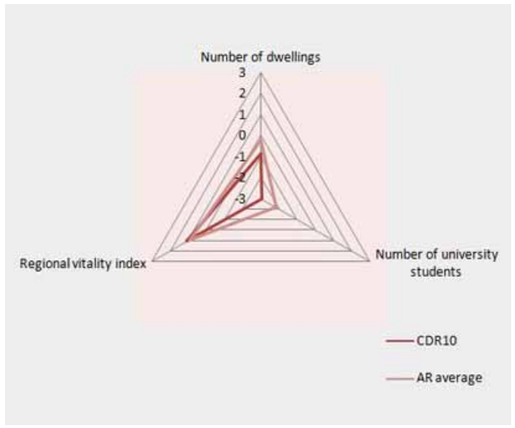
GS	Strengths	Weaknesses
NC	Large share of agricultural land in Podunavska and Južnobanatska oblast Large share of forest land in Braničevska oblast High share of protected areas in Južnobanatska oblast	NATURA 2000 is not established yet Podunavska oblast has the lowest share of protected areas among nine Danube regions in Serbia Inappropriate waste collection, transport and storage
SSHR	Južnobanatska oblast is a relatively polycentric region (two important centres being Pančevo and Vršac) Smederevo and Pančevo are centres of national importance while Vršac is regional centre There is a housing surplus in Braničevska oblast	Constant population decline in all three regions Important long-term out-migration in Braničevska oblast (Very) low share of economically active population (in Braničevska oblast - 41.4%, in Podunavska oblast – 44.3%, in Južnobanatska oblast - 50%) Very low education level in Braničevska oblast
TTI	Two pan-European corridors (Corridor X and Corridor VII) pass through Podunavska oblast Gas fields in Južnobanatska oblast, oil rafinery and petrochemical industry in Pančevo TPP „Kostolac B“ in Braničevska oblast	Unsatisfying state of existing railroad network Multimodal terminal infrastructure is not developed Terminal infrastructure is only partially developed (ports of Smederevo and Pančevo) Insufficient RES production in all three regions
E	Južnobanatska oblast has the third highest GDP per capita among nine Serbian Danube Regions Four industrial zones Continuous development of SMEs	Podunavska and Braničevska oblast have a low employment rate A very low level of investments and weak entrepreneurship culture
GS	Opportunities	Threats
NC	Possibility of identification of NATURA 2000 areas Enrollment of Deliblatska Peščara and National Park Derdap in the UNESCO World Heritage List Development of tourism based on natural values	Loss and fragmentation of habitats Lack of funding for nature protection and environment Inappropriate waste management Natural disasters (floods.)
SSHR	Better administrative integration of Pančevo and Belgrade Better functional integration of Vršac and Timisoara Polycentric industrial development in all three regions	Further worsening of the age structure Further worsening of all population trends, especially in Braničevska oblast Increase in unemployment Industrial decline
TTI	Upgrade of 1st class road into a new part of motorway E-70 (SEETO route 4): border with Romania - Vršac - Pančevo – Belgrade Reconstruction, expansion and modernization of sewage networks	Reducing public investments in transport infrastructure due to economic crises and political situation Reducing investments in reconstruction of water-protection infrastructure and regional sewerage network in Južnobanatska oblast
E	Rehabilitation and re-use of existing industrial sites Increasing number of big eneterprises in Podunavska oblast Development of sustainable tourism in Braničevska oblast	Industrial decline Decreasing number of big enterprises in Braničevska oblast Polarization of investments towards Belgrade Prolonged global economic crisis Macroeconomic instability

CDR No.10 Smederevo - Kovin - Požarevac consists of three NUTS3 regions (Podunavska oblast, Južnobanatska oblast and Braničevska oblast). Total area is 9 328 km².

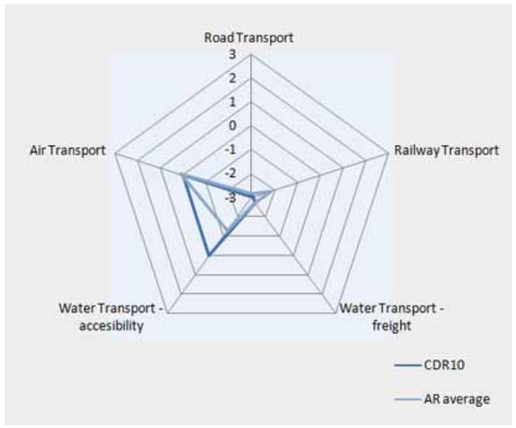
Graph 45



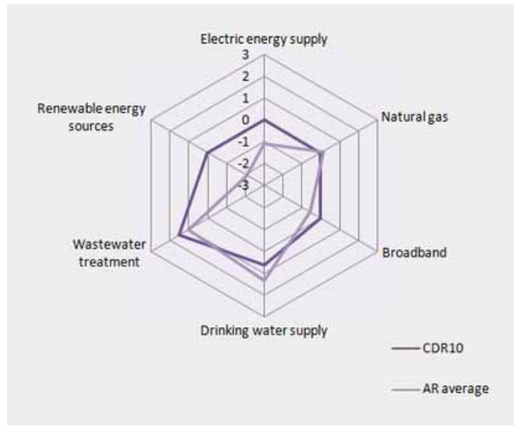
Graph 46



Graph 47



Graph 48



CDR Strategy

General Scheme: Natural Conditions

Global objective: Quality environment

SO 1: Increasing the share of protected areas

P 1.1: Increasing total area under protection

M: Proclamation of new protected areas (Kučaj with Beljanica, Karaš-Nera, Potamišje); revision of the status of previously designated protected areas (National park Derdap, Natural park Ponjavica and Natural Park Jegrička); enrolling Jegrička and Potamišje to the Ramsar List; preparing documentation for enrolling Deliblatska Peščara, Derdap and Kučaj mountains to the Biosphere Reserves List, enrolling Derdap and Deliblatska peščara to the UNESCO Worls Heritage list; establishing the National Ecological Network (NEN) and NATURA 2000; establishing an information system on protected areas

SO 2: Prevention of the degradation of natural resources

P 2.1: Protection of agricultural land (as natural resource)

M: Change of the law on agricultural land and its implementation

SO 3: Protection and improvement of the environment

P 3.1: Air quality improvement and the reduction of the emission of air pollutants

M: Reduction of the emission of the polluting materials from the steel factory, industry, traffic and other sources; further development of centralized heating system and encouragement of gas usage; increasing the usage of renewable energy resources; establishment of the air quality monitoring in all municipalities; maintenance of forests and development of green belts around commercial facilities

P 3.2: Improvement of water quality

M: Definition of the Water Management Plan for the Danube River (ICPDR); construction of WTP of general type for every settlement with more than 5000 EI; construction of WTPs in connection to industries; establishing an emission monitoring network for waste waters

P 3.3: Improvement of the waste management

M: Closing, repairing and remediation of current dumps in all communities; construction of regional waste management centres in Pančevo, Smederevo and Petrovac; construction of central regional hazardous waste landfill in Podunavska oblast

SO 4: Improving water management

P 4.1: Protection of water sources

M: Establishing all three protective zones; prevention of illegal construction in underground water sources areas

Graph 45: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Improved demographic situation and polycentric structure

SO 5: Demographic recovery

P 5.1: Reversing negative population trends

M: Economic, physical and social renewal of settlements; attraction of new technologies in technologically intensive industrial sectors.

P 5.2: Improving education structure

M: The adaptation of education system to the economic needs.

SO 6: Strengthening polycentric structure and functions

P 6.1: Strengthening the role of towns

M: Decentralization of functions and comprehensive planning within FUA; monitoring of spatial phenomena and processes within FUA and centres of rural associati-

ons; valorization of the position of Podunavska oblast at Corridors 10 and 7; development of transport and other technical infrastructure in order to establish a polycentric network of settlements in Podunavska and Braničevska oblast; development of spatial organization and distribution of centres and public functions.

Graph 46: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Efficient transport and technical infrastructure in line with environmental standards

SO 7: Increased accessibility and integrated transport system

P 7.1: Reconstruction and development of the road network

M: Extension of E-70 highway: (Belgrade) - Pančevo - Vršac - border with Romania; reconstruction and termination of M24; better management of planning, designing and building, usage and maintenance of road infrastructure

P 7.2: Reconstruction and development of the railroad network

M: Restoration and modernization of E70 and E 85: Belgrade-Niš, E 66: Belgrade-Vršac and of the regional railroad Pančevo - (Zrenjanin - Kikinda - state border); reconstruction and modernization of railway stations in Pančevo and Smederevo

P 7.3: Development of waterborne transport

M: Minimizing administrative, technical and legal obstacles; establishment of the Port Authority; popularization of waterborne transport and education of new staff; reconstruction and modernization of public ports/terminals of state importance (Pančevo, Kovin, Smederevo and Veliko Gradište)

P 7.4: Development of air transport and operations

M: Modernization and expansion of regional airport in Vršac; modernization and expansion of sports, training and agricultural airports in Pančevo, Bela Crkva, Smederevo, Smederevska Palanka.

P 7.5: Building multimodal/intermodal transportation system

M: Introducing intermodal transport, containerisation, Ro-Ro transport, river to sea traffic, etc; establishing logistics platform Belgrade-Pančevo-Kovin-Smederevo; forming potential intermodal terminals and logistics centres in: Pančevo, Smederevo and Vršac

Graph 47: T indicators status in 2020

SO 8: Reliable energy supply and increased use of RES

P 8.1: Reliable generation and distribution of electric energy

M: Reconstruction of electric substation TS Pančevo 2, electricity trunks of 400kV, Belgrade 8-Pančevo and 220 kV Belgrade 8 – HI Pančevo (the part on the Danube), TS 110/35 kV Pančevo 1, 110 kV (Belgrade 3) – Kostolac, 110 kV and (Majdanpek 3) – Petrovac; expansion of existing facility TS 400/220/110 kV Smederevo 3 and construction of trunks of 400kV; construction of trunks 2 x 400kV Pančevo-Resita (Romania), new trunk 110 kV Veliko Gradište – Bela Crkva, new TS 110/x kV Pančevo 5; construction of the plant Kostolac B3 with the power up to 700 MW

P 8.2: Developing facilities for the use of RES

M: Construction of wind farms and wind turbines in the municipalities of Bela Crkva, Kovin and Alibunar; creating national action plan for the use of biomass

P 8.3: Further expansion of the gas network

M: Ensuring funds from the public enterprise “Srbijagas” for the further implementation of gasification program in the Republic of Serbia; construction of “South stream” gas pipeline and the implementation of gasification program, as well as connecting the system with gas pipelines in other countries (Braničevska oblast); further exploitation of the major gas fields in Južnobanatska oblast

SO 9: Development of Information Society

P 9.1: Development of telecommunication network and Internet

M: Expansion of broadband; improving access to the Internet, especially in rural areas

SO 10: Expansion of drinking water supply and waste water systems

P 10.1: Expansion of public drinking water network

M Construction of Južnobanatski regional water supply system; construction of Mlavsko-moravski regional water supply system, including construction of 4 artificial lakes (Vitman, Gradac, Kučevo and Dubočica), which will supply the municipalities of Braničevska and Podunavska oblast

P 10.2: Expansion of public sewerage networks and wastewater treatment

M Reconstruction, expansion and modernization of sewage networks; construction of WTP of general type for every settlement with more than 5000 EI.

Graph 48: TI indicators status in 2020

General Scheme: Economy

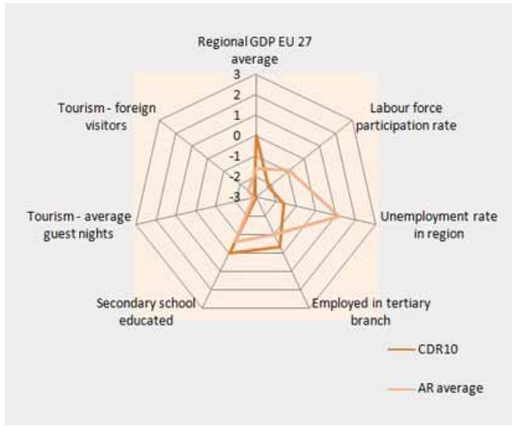
Global objective: Consolidated economic basis

SO 11: Consolidated economic sectors

P 11.1: Consolidated agriculture

M: Change of the law on agricultural land and its implementation; diversification of agricultural production and

Graph 49



creation of agricultural-industrial parks; increasing the quality of agricultural products; development of fishery.

P 11.2: Consolidated industry

M: Development of industrial zones in Vršac and Bela Crkva; development of the Cross-Danube industrial park Smederevo-Kovin; creation of petrochemical complex in Smederevo; introduction of new technologies and technical innovations; oil extraction in Kovin-Požarevac area.

P 11.3: Consolidated services

M: Support for the development of SMEs; clustering companies according to the allocation of resources and transportation networks.

P 11.4: Profiled tourist offer

M: Valorisation of natural and cultural heritage; identification and constitution of the tourist offer: recreational and nautical tourism, agro-tourism, cultural tourism, natural values, traditions.

SO 12: Consolidated labour market

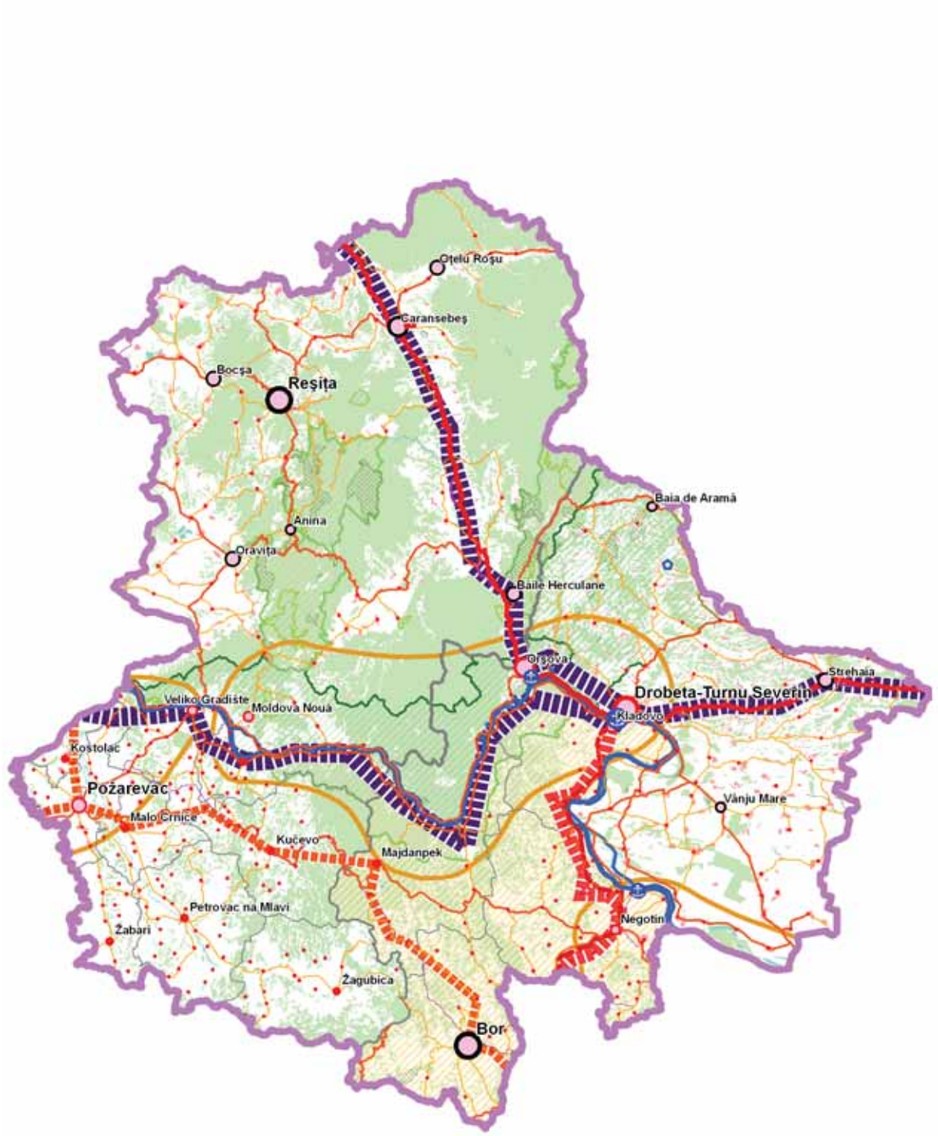
P 12.1: Increased share of economically active population

M: Improvement of the age structure; increase in employment.

P 12.2: More qualified labour force

M: The adaptation of education system to the economic needs; specialised trainings.

Graph 49: E indicators status in 2020

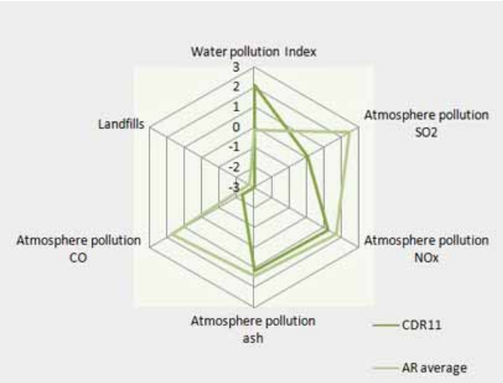


SWOT analysis

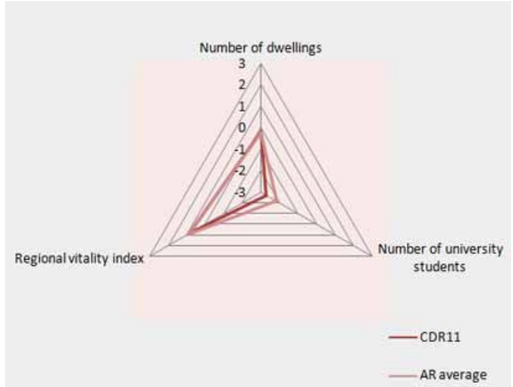
GS	Strengths	Weaknesses
NC	Natural capital of great value: biodiversity, landscape, water resources, forests, fisheries Potential of large forested areas combined with important agricultural areas The presence of the specialized human resources in environmental protection	None of the examined river profiles fully satisfied the demanded water quality class - Existing situations of wastewater discharge directly into waterways Reducing of fish stock by poaching, threatening of species Low level of public awareness for local environmental issues
SSHR	Ethnic, religious and cultural diversity - multicultural valence area Skilled labour force for mining industry Although there is a trend slightly downward (characteristic of the whole country), population is in an area of stability	Migration in recent years, especially of young people; Part of the population with initiative has left the area Negative natural population growth (-8.5 per mille) in Serbian part Increasing share of aged population
TTI	Existence of border crossing points: Naidas, Moravita, Iron Gates I, Iron Gates II, Drobeta Turnu Severin Well-developed electrical networks throughout the area, terestrial phone network and mobile phone networks International waterway E 80 Danube Important ports on Danube: Drobeta Turnu Severin, Prahovo, Orsova, Veliko-Gradiste	Low connectivity between Romania and Serbia (few border crossing points and at relative large distance between them) Old, low efficient, insufficiently developed water supply networks In the whole Serbian part of Danube Region Borski county has highest share of non-paved roads (61.28%) Multimodal terminal infrastructure is insufficient developed
E	Existence of a variety of raw materials for industry Existence of 4 important ports and possibilities of development for these and other new ports Human resources qualified and available, looking for a job The low price of buildings and land	Existing of many mono- industrial localities, with sharp reduction of the main activity –mining Weak entrepreneurship culture Low development of cooperation between companies, undeveloped cluster system Lower GDP in the region than average
GS	Opportunities	Threats
NC	Existing support for environmental investments by European cross-border programmes and other European programmes Development of tourism based on natural values Enrolment of the National Park Derdap / Iron Gate into UNESCO World Heritage List Existence of regional/local strategies and programs for waste management, water distribution and treatment, wastewater treatment	Increasing pressure of human activities on the environment, including on protected areas by exploiting activities of resources, especially those illegal, in an area where the main activity, mining, is in decline The emergence of new polluters along with the economic development of localities Low level of funding for projects Continuation of the inappropriate waste management
SSHR	Developing of agro tourism offers the possibility of professional reconversion of redundant staff Existing EU funding programs and national funding for human resources Tourism development can support the development of cultural activities	Migration of skilled labor force to EU countries and big cities in the country Further decline of mining industry in Serbian part Insufficient financial resources and difficulty in accessing funds for civil society, culture, art
TTI	Development of cross-border cooperation and cooperation with border neighboring cities to develop infrastructure Development and upgrade of infrastructure at multimodal/ intermodal terminals The existence of funding sources through grants, including European funds Existing of awareness for development of ports	Delays in starting the modernization and expansion of ports will lead to loss of economic competition in cross border region Failure to adapt transport infrastructure to existing demand Reducing the public investments in infrastructure due to economic crises and political situations
E	Awareness at regional level of the need to develop new ports as points for boosting touristic activity Creation of industrial zones and industrial parks Polycentric industrial development	Migration of highly skilled labor force Aging population and perpetuation of mentalities Macroeconomic instability in Serbian region Insufficient absorption of European and national funds

CDR No.11 Moldova Noua - Golubac - Kladovo - Drobeta - Turnu Severin consists of three NUTS3 regions (Podunavska oblast, Južnobanatska oblast and Braničevska oblast). Total area is 9 328 km².

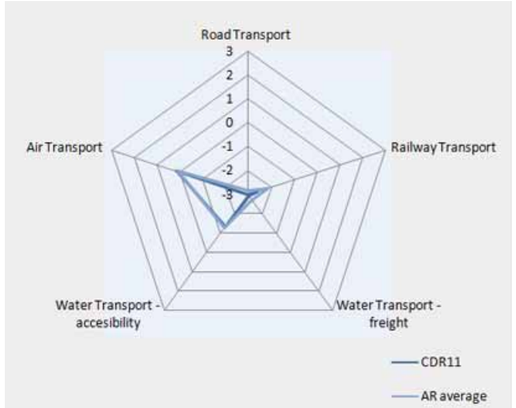
Graph 50



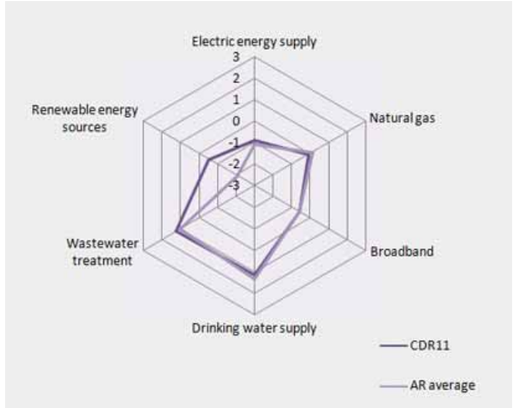
Graph 51



Graph 52



Graph 53



CDR Strategy

General Scheme: Natural Conditions

Global objective: Quality environment

SO 1: Clean water

P 1.1: Water management and wastewater utility development

M: Building new water systems (especially in nrural areas) and modernization of existing ones, synchronize wastewater discharge out of existing sewage with acts legislative, survey and monitoring of priority environmental burdens, monitoring of pesticides in groundwater

SO 2: Waste management in line with EU requirements

P 2.1: State of the environment

M: Achieving shore protection to protect natural habitats between on the left bank of Danube in the region of Caras-Severin county; Implementing of municipal waste systems for all area; Remove the illegal deposits of waste; Greening the areas affected by industrial pollution, especially waste dumps; Increase the recyclable fraction collected; Increase the material recovery of construction waste;

P 2.2: Increase energy efficiency and alternative energy sources

M: encourage the sustainable use of wind energy, solar, biomass, hydro; promoting environmental thinking method; promote the sustainable consumption at the level of households and institutions;

SO 3: Reduction of air pollution

P 3.1: Air pollution

M: increasing of the rail and naval trransport for persons and goods; tighten up of general emission limits for new large and medium air pollution sources.

P 3.2: Programming in the field of environment protection

M: create conditions in the local physical plan and Economy and Social Development Programme for increase the efficiency of heating; Harmonization of tourism development requirements with protection of natural protected areas by increasing awareness of public and tourists;

Graph 50: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Increasing life quality of inhabitants

SO 4: Residential Construction

P 4.1: Living Standards

M: Support existing development poles as well as development and creation of new poles in the Danube Clisura; Modernization of rural settelment, Housing development, Housing modernization.

SO 5: Human Resources

P 5.1: Education and continous formation

M: The harmonization of educational, continuous professional training and conversion programs with the real requirements; Exchanging experience and achieving knowledge transfer in localities management, in support of local initiatives.

Graph 51: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Improvment of the transport and yechnical infrastructure

SO 6: Transport

P 6.1: Road Network

M: Improvement of bearing capacity of DN 57 to 2 lanes/way (making express road); Rehabilitation of municipal and town roads; Road upgrading (making express road) Simian - Iron Gates II - Calafat. Improvement of connectivity between Romania and Serbia: construction of new bridges

Pojejena-Pozezeno, Socol-Vracev Gaj, making crossing points by ferry: Moldova Noua-Golubac

P 6.2: Railway Network

M: Reconstruction of the railway along the Danube Clisura: Orsova – Bazias; Construction of a railway Turnu Severin – Calafat; Connecting of ports by improving road and rail infrastructure;

P 6.3: Air Transport

M: Technical and capacity mprovement for Kostolac, Bor and Caransebes airports

P 6.4: Waterways and Ports

M: Modernization of Prahovo, Moldova Veche, Drobeta Turnu Severin and Orsova ports; Re-opening of some closed ports, setting up new ports, especially for medium sized boats (Simian, Drancova, Pojejena, Bazias, Dubova, Svinita, Eselnita, Gruia, Garla Mare)

P 6.5: Multimodal Transportation System and Terminals

M: Modernization and development of the terminal infrastructure for international ports (Prahovo, Drobeta)

SO 7: Efficient energy, decreased dependency and increased use of renewable energy sources

P 7.1: Efficient Electric Energy Sources

M: Using alternative energy sources; Measures aimed at increasing energy efficiency; Increase electricity production from RES (encourage the sustainable use of wind energy, solar, and hydropower);

P 7.2: Electric Energy Networks and Installations

M: Increased supply security;

P 7.3: Natural Gas Supply

M: Completion of natural gas network in all Caras Severin and Mehedinti Counties

SO 8: Development of Information Society

P 8.1: Telecommunications Network and Digital literacy development

M: High speed networks innovation; Support of wider broadband access especially in rural parts of region;

SO 9: Development of drinking water supply and waste water systems

P 9.1: Development of water supply networks in rural areas

P 9.2: Wastewater treatment development

M: Wastewater collection and treatment systems for all urban and rural agglomerations

Graph 52: T indicators status in 2020
Graph 53: TI indicators status in 2020

General Scheme: Economy

Global objective: Competitive economy with focus on high level of employment rate and developed industrial – touristic region

SO 10: Knowledge based economy

P 10.1: Economic potential

M: Exploitation of mineral resources by reopening some mines closed in the past; Development of agro livestock farms; Development products processing centers for agricultural, forestry and fishery raw materials; Development of fish production; Promoting entrepreneurship and self-employment of unemployed; Development of transport (air, road, railway, water and combined); Reduce emigration of highly qualified workers to abroad; Creating the conditions for innovation;

SO 11: Creating the appropriate environment to encourage the development of employment

P 11.1: Business environment

M: Establishment of cross border trade centers; Promoting entrepreneurship and self-employment of unemployed; Development of agro-tourism; Support for the modernization of agricultural production; Development of a competitive industrial base;

P 11.2: International cooperation

M: Development of international trade; International cooperation focused on partnerships in cross-border cooperation with neighboring countries.

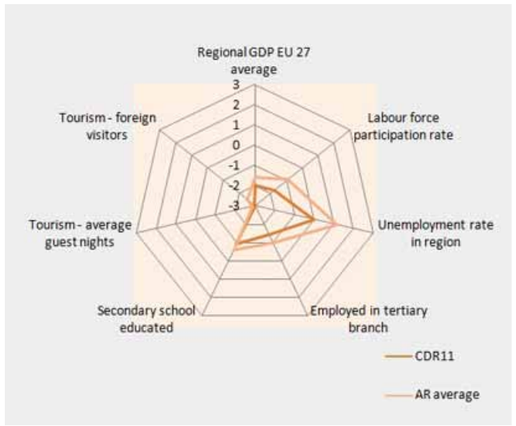
SO 12: Unique touristic industry

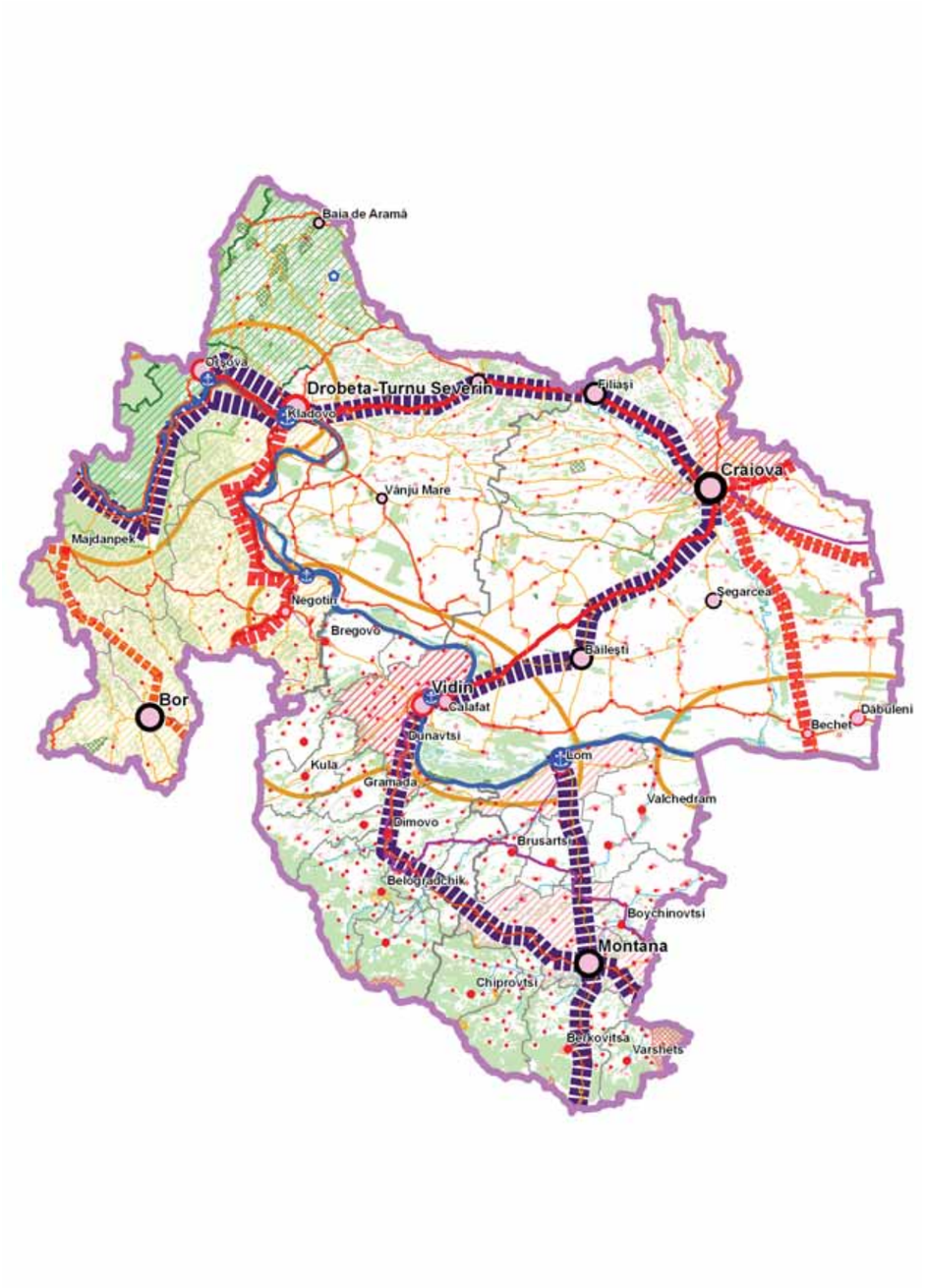
P 12.1: Development of touristic attractions

M: Achieving an integrated tourism offer considering the existing complementarities in the cross border area and potential (natural values, multiculturalism, traditions, historical sites, monasteries, opportunities for recreation, sport, leisure, etc.); Promotion of the integrated tourism offer to the big tour operators and by making information centers in major cities of the Danube Clisura; Creation of recreational areas and conditions for water sports.

Graph 54: E indicators status in 2020

Graph 54



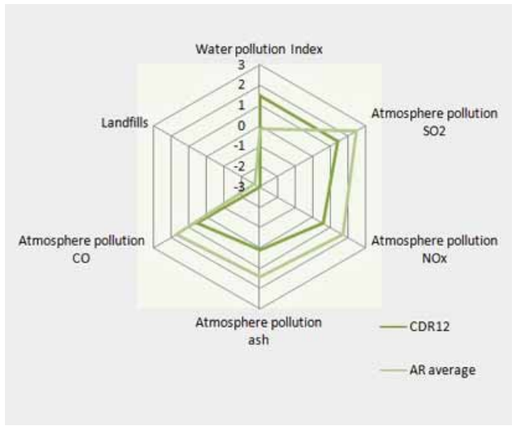


SWOT analysis

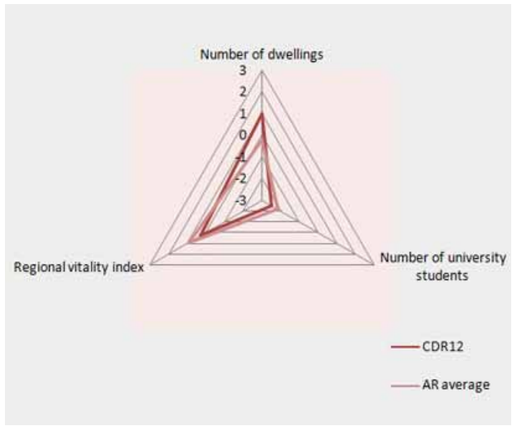
GS	Strengths	Weaknesses
NC	Presence of mineral resources Large mountainous territories Rich biodiversity The existence of thermal water	High vulnerability of protected territories Relatively high concentrations of dust and other air pollutants Risk for cross-boundary pollution
SSHR	Improvement of the education level Significant increase of new dwellings Universities Cross-border cooperation in social issues	Strong negative natural growth Very low employment rate High share of employment in agriculture Depreciated urbanized environment
TTI	Relatively good cross-border connection Well-developed port infrastructure Well developed regional road network The existence of Craiova airport Sewerage network in municipalities	Absence of highways and high speed roads Limitedly developed first class road network Limitedly developed first class road network Weak drinking water supply Lack of wastewater treatment plants
E	Available favourable conditions for agriculture Long outlet to the Danube River Various natural resources and raw materials Industrial tradition Favorable conditions for natural and eco tourism	Poor condition of the basic infrastructure Ageing and untrained workforce of low qualifications High unemployment rate Low productivity and diversification in agriculture Decline in industry employment
GS	Opportunities	Threats
NC	Identification of new Natura 2000 sites Ecological restoration of habitats and species Cross-border cooperation	Flood threat Desertification Danube River polluting
SSHR	Construction of transport links Relatively large funds allocated by the EU Cross-border cooperation with Serbia and Bulgaria Promotion of national housing programs	Ageing of the population Migration of young people from rural to urban areas Rural poverty and poor social services Difficulties integrating a number of gipsy minorities
TTI	Modernisation of the railway infrastructure Restoration of Vidin airport Development of transport infrastructure in border area Modernization of the telecommunications network Repair of water supply network	Insufficient financial resources Delayed construction of Danube Bridge II Insufficient development of intermodal transport facilities Aging infrastructure of water supply and sewage systems Delay in construction of gas pipeline network and inability for domestic gasification
E	Development of tourism and cruise tourism on the Danube Well developed research sector in Dolj county Expansion of business services sector Territorial cooperation, incl. cross-border	Lack of proactive and qualified entrepreneurs Poor entrepreneurial education Progressively increasing disparities between rural and urban Degradation of natural and cultural heritage

The CDR No.12 Negotin - Vidin - Calafat – Lom lies on the territory of three countries (Serbia, Romania and Bulgaria). It consists of five NUTS3 regions (Borska oblast, Judetul Mehedinti, Judetul Dolj, Vidin, Montana). Total area is 22 482 km².

Graph 55



Graph 56



CDR Strategy

General Scheme: Natural Conditions

Global objective: Implementation of environmental measures and prevention of environmental risks

SO 1: Water and waste infrastructure and management

P 1.1: Water infrastructure and management in urban and rural areas

M: Construction, rehabilitation, modernization of drinking water networks, Construction, rehabilitation of drinking water treatment plants, Construction, rehabilitation, upgrading sewage systems.

P 1.2: Reduction of Air Pollution

M: Introduction of low-emission transport, Cross-boundary cooperation to improve monitoring, and prevent and reduce air pollution, Institutional and administrative support for investment projects.

P 1.3: Waste infrastructure and management

M: Completion of regional MSW landfills, Introduction of systems for centralized collection of waste, Introduction of systems for separate collection.

SO 2: Environmental risk management

P 2.1: Environmental conservation and improvement of quality of life

M: Creating infrastructure for flood prevention, Implementing drought-prevention and alleviation measures, Develop flood risk maps for the cross-border area.

SO 3: Natural gas and renewable energy

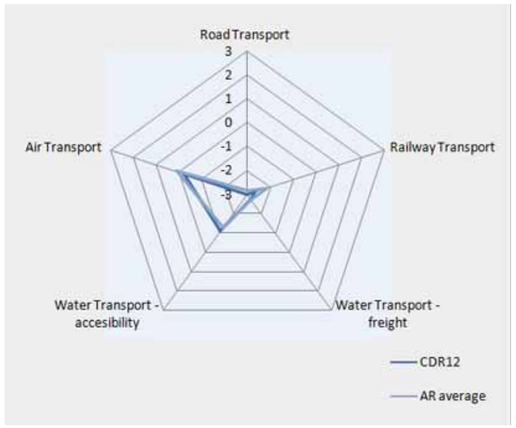
P 3.1: Improving efficiency of energy supply and reducing negative environmental impact

M: Development of a regional plan for RES development, Projects for cross-boundary cooperation in the RES, Expansion and modernization of gas supply systems.

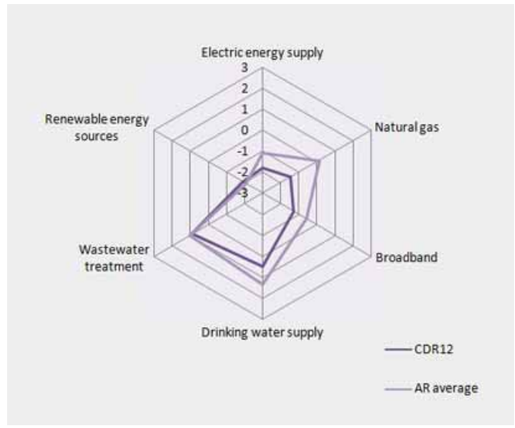
SO 4: Biodiversity and natural heritage conservation

P 4.1: Preservation of protected territories

Graph 57



Graph 58



M: Reforestation of protected areas, Restoration of wetlands along the Danube River, Cross-border cooperation especially in the Danube River aquatory.

P 4.2: Long term biodiversity protection

M: Interconnection of protected territories, Reintroduction of extinct or declining native animal and plant species, Adaptation to climate change.

Graph 55: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Adapting to demographic change and tackling spatial inequality

SO 5: Adaptation to the peripheral character and the demographic decline within the region

P 5.1: Development of activities, suitable for the limited human resources

M: Efficient use of the available territorial resources, Large scale agricultural production.

P 5.2: Interventions in the built environment

M: Use of the empty stock for cultural functions, Redevelopment of disused housing for other uses, Adaptation of the social infrastructure for the needs of the declining and ageing population.

P 5.3: Making the self area of the CDR an integrated core of activities, overcoming the barriers between the three countries

M: Development of adequate infrastructure and built environment, Introduction of economic stimuli, Efficient use of the local resources.

P 5.4: Securing adequate spatial and strategic planning frame for the development of the whole territory of the CDR

M: Elaboration and implementation of common strategies for spatial development, Join elaboration and implementation of social measures, Development of targeted and effective housing policy.

SO 6: Sustainable development of human resources

P 6.1: Improving the pre-schooling and schooling system

M: Securing financing for schools, Improving the qualification of teachers, Inclusion of vulnerable social groups into the educational system.

P 6.2: Improving access to higher education

M: Assisting students willing to pursue higher education, Improving the accessibility of university education, Establishment of a new Technical university in Vidin.

P 6.3: Increasing skills and workforce adaptability

M: Promoting adaptability of human resources in industry, Development of human resources in rural area, Training and retraining of human resources in services sector.

SO 7: Improvement of the built environment of the settlements

P 7.1: Improvement of living conditions

M: Reconstruction of housing, Improvement of public works in residential areas, Improvement of living conditions within the Roma neighbourhoods.

P 7.2: Interventions in industrial and logistic areas

M: Regeneration of inefficient industrial areas, Development and improvement of industrial and harbor infrastructure.

Graph 56: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Increase accessibility and connectivity of CDR

SO 8: Integration of transport system in European Transport Network

P 8.1: Improving of cross-border land transport infrastructure

M: Construction of a combined (road/railway) bridge over the Danube, Building a high-speed road Vidin - Montana (E 79), modernization of the highway I-1, Improving cross-border mobility.

P 8.2: Reconstruction and modernization of the regional road infrastructure

M: Building of a "Danube scenic route", Rehabilitation and maintenance of roads, Construction and maintenance of roadside service infrastructure.

P 8.3: Development and modernization of railway infrastructure

M: Modernization of railway line Vidin-Sofia, Modernization of the railroad stations in the Southern part of the county, Development of the facilities of intermodal transport in Calafat port.

SO 9: Water and air transport

P 9.1: Development and modernization of the river transport network and ports infrastructure

M: Improving conditions for navigation on the Danube, Modernization of the infrastructure of the port of Lom, Development of logistics infrastructure.

P 9.2: Development of air transport, increasing the access to international airports

M: Craiova International Airport Modernization, Modernization of European roads E70 and E574, Restoring the functioning of the Vidin airport.

SO 10: Completion and development of energy infrastructure

P 10.1: Energy and environment –renewable energy

M: Investment in power generation systems and heat from renewable sources, Construction and modernization of cogeneration units, Promote and encourage use of non-polluting electric vehicles.

P 10.2: Energy and environment – natural gas

M: Expansion and modernization of gas supply, Construction of gas pipeline network and gasification of the town of Vidin, Building the gas transmission pipelines.

SO 11: Connectivity

P 11.1: Improvement of ITC Infrastructure

M: Promotion of broad band access and related services, Development of broad band networks in schools, Improving communication infrastructure.

P 11.2: Development of TC infrastructure for small settlements

M: Expansion of telephone networks in the settlements, Broadband access in sparsely populated settlements and rural areas, Increase the accessibility of coverage in the border area.

SO 12: Water management and infrastructure in urban and rural areas

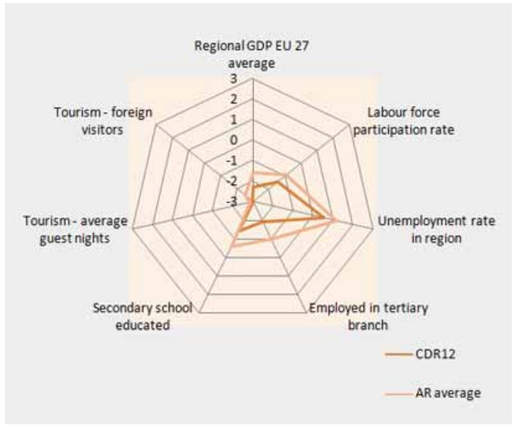
P 12.1: Improving the water supply of settlements

M: Central power supply for all settlements, Construction, rehabilitation of drinking water treatment plants, Construction, rehabilitation, modernization of drinking water networks.

P 12.2: Environmentally sustainable development

M: Integrated management and water sanitation in the town of Lom, Completion and rehabilitation of sewerage infrastructure for drinking water supply, Construction, rehabilitation, modernization of sewage systems.

Graph 59



Graph 57: T indicators status in 2020
Graph 58: TI indicators status in 2020

General Scheme: Economy

Global objective: A dynamic and diversified economy

SO 13: Competitiveness

P 13.1: Development and diversification of rural economy

M: Modernization of agricultural holdings, Public-private partnerships, local development strategies, Promoting the values of local products, support the creation of brands.

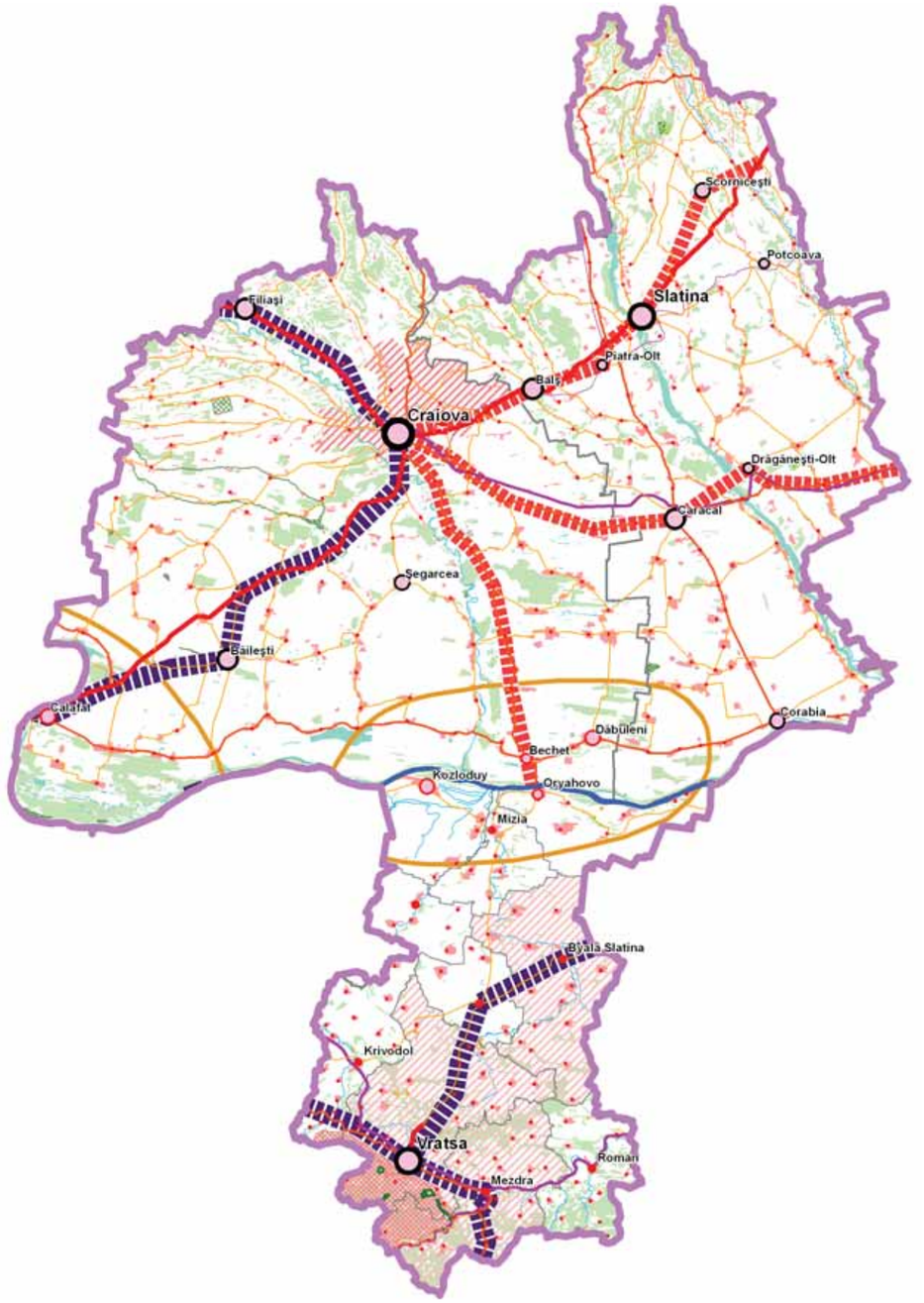
P 13.2: Promoting innovation and support for SMEs

M: Establishment of clusters and poles of excellence in key sectors, Develop craft centers, clusters and communities, Rehabilitation and re-use of unused polluted industrial sites, Improving IT systems in SMEs.

P 13.3: Promoting the tourist potential

M: Rehabilitation of heritage tourism, of health and cultural tourism, Development of tourism infrastructure, Development of rural tourism and agro-tourism.

Graph 59: E indicators status in 2020

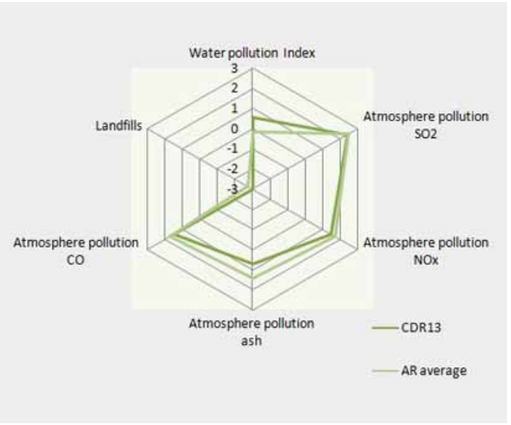


SWOT analysis

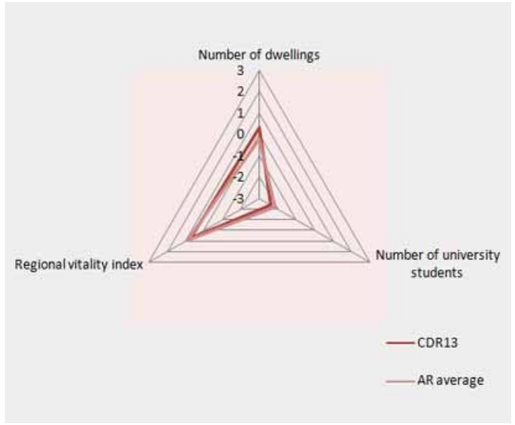
GS	Strengths	Weaknesses
NC	Rich natural resources (water, biodiversity), mountainous areas High share of agricultural land of good quality Low pollution of water bodies Energy production from renewable clean sources No accidental pollution with cross-border effects	Low percentage of protected areas, low forest cover and deforestation in the Romanian part of CDR, Land desertification in the Southern part of Dolj county The water quality is affected by wastewater discharge, nitrites and nitrates Risk of nuclear contamination
SSHR	Well represented and evenly distributed settlement network , favorable transport location Vratsa city, of regional importance Well-developed education system, Craiova University – regional research pole	Constant decrease of population, low life expectancy Accelerated depopulation in rural areas, with poor health and education infrastructure Low interest of gipsy population in terms of education Migration of qualified workforce
TTI	Good location against important European routes Existence of ports with border crossing points Presence of ferry Oryahovo-Bechet Existence of Craiova airport	Lack of highways and express roads Lack of road and railroad border crossing points Insufficient irrigation infrastructure Low consumption of natural gas
E	Rich natural resources (good agricultural conditions) Favorable conditions for natural and ecological tourism Cross-border cooperation in economic field	Low GDP per capita, low density of enterprises per capita Concentration of enterprises in urban areas Poor irrigation system, use of large amounts of fertilizers Bad condition of the basic infrastructure
GS	Opportunities	Threats
NC	New NATURA2000 sites Reconstruction of irrigation systems Accessing structural funds Restoring the Danube banks to prevent flooding	Insufficient financial resources Large amount of waste due to urban and industrial development Long-term risk from radiation pollution (Kozloduy NPP)
SSHR	Efficient use of EU funds, attracting foreign investments Implementation of national programs and strategies Re-qualification of the personnel in tourism	Deepening of the demographic crisis Very small and depopulated settlements Workforce migration Low rate of accessing EU funds Gap between school and labor requirements
TTI	Rehabilitation and modernization of road and railroad networks and of existing Danube ports Progressive development of natural gas supply Investment for using solar and wind energy Extension of technical infrastructure in rural areas	Insufficient financial resources Deterioration of roads towards Oryahovo-Bechet ferry Low accessibility of some rural areas Increased water losses and damage to the environment Insufficient development of intermodal transport facilities Slowing the process of using the RES potential
E	Increasing productivity in agriculture by promoting individual holdings Improving the irrigation system Revitalization of rural areas The possibility and ability to make organic products	Lasting economic crisis Increasing the disparities between urban and rural areas High inertia of absorbing EU funds Strong national and international competitiveness Lack of investor's interest

CDR No.13: Bechet – Oryahovo lies on the territory of two countries (Bulgaria and Romania). It consists of three NUTS3 regions (Vratsa District, Dolj and Olt Counties). Total area is 16 526 km².

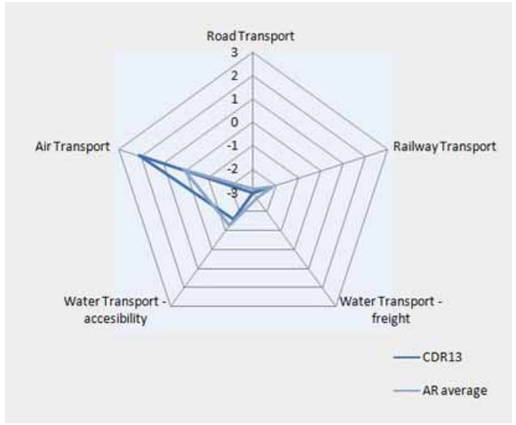
Graph 60



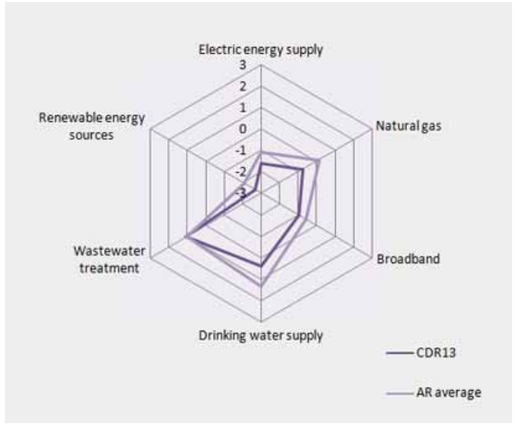
Graph 61



Graph 62



Graph 63



CDR Strategy

General Scheme: Natural Conditions

Global objective: Improving the quality of natural environment

SO 1: Protection of nature and landscapes

P 1.1: Sustainable agricultural land use and forest management

M: Promoting sustainable agriculture; stopping forest loss; new tree planting; new forests functions etc.

P1.2: Preserving biodiversity

M: effective management of protected areas; raising public awareness; cross-border cooperation etc.

SO 2: Improving the quality of environment

P 2.1: Improving air quality

M: Improving air quality in settlements and agricultural land areas; clean industries and technologies etc.

P2.2: Water management

M: Treatment of municipal and industrial wastewater; improving condition of the Danube and other surface bodies etc.

P2.3: Soil protection

M: Non-intensive sustainable agricultural practices; selection of adequate crops; etc.

SO3: Waste management

P3.1: Management of natural and accidental risks

M: Effective management of risk of industrial accidents, floods and other disasters

SO4: Development of renewable energy sources (RES)

M: Identification of the potential of different types of RES; cross-border cooperation in the field of RES etc.

Graph 60: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Development of human potential and social welfare

SO 5: Improvement of the demographic situation

P 5.1: Improved public health and quality of life

M: Preventive care, improving provision of health facilities; supporting the family.

P5.2: Improving the quality of life for disadvantaged groups

M: Construction of rental houses for families and people with social problems; services for children with disabilities etc.

SO 6: Improving the educational infrastructure

P 6.1: Improving the pre-schooling and schooling systems

M: Securing financing for schools; improving the qualification of teachers etc.

SO7: Improving the connectivity of settlements within the self area of CDR13

P7.1: Strengthening cross-border connections

M: Improving transport links between Oryahovo and Bechet; integrating the labor market etc.

Graph 61: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Increased accessibility and connectivity

SO 8: Improved transport infrastructure

P 8.1: Road infrastructure

M: Building the Calafat-Vidin Bridge and a bridge at Oryahovo-Bechet; bypass roads; modernization of roads etc.

P 8.2: Railway transport

M: Rehabilitation/modernization of railroad infrastructure and stations; facilities of intermodal transport etc.

P 8.3: Water transport

M: Calafat and Bechet ports modernization and expansion; improving conditions for Danube navigation etc;

P 8.4: Airport infrastructure

M: Modernization of Craiova International Airport, of county and communal roads etc.

Graph 62: T indicators status in 2020

SO9: Development of electrical and thermal networks, use of alternative energy resources

P9.1: Electricity transport and distribution

M: Implementing investment programs; developing electric power transport infrastructure in cross-border area etc.

P9.2: Heat transport and distribution:

M: Expansion of heat production and distribution systems; using alternative energy sources etc.

SO10: Development and extension of gas supply

P10.1: Gas infrastructure

M: Expansion of gas infrastructure in rural areas; gas supply (e.g. in Oryahovo); rehabilitation of existing pipelines etc.

SO11: Telecommunication and postal services development

P11.1: Expansion of telecommunication and postal services

M: Promotion of broadband access in rural and remote areas; complete digitization of networks etc.

SO12: Extension and development of water supply and sewerage networks

P12.1: Modernization of water and wastewater infrastructure

M: Works on watercourses; water interconnection in cross-border areas; replacement of water pipelines; integrated systems of drinking water and wastewater infrastructure, construction of new sewerage systems etc.

Graph 63: TI indicators status in 2020

General Scheme: Economy

Global objective: A dynamic and diversified economy

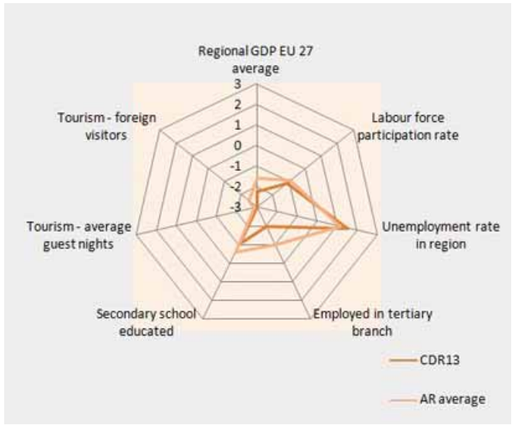
SO 13: Competitive economy

P 13.1: Business infrastructure: attracting investments

M: Identifying new business opportunities and new locations for developing business incubators; promoting the identity of the region of Dolj-Olt-Pleven-Vidin-Montana etc.

P 13.2: Promoting innovation and support for SMEs

Graph 64



M: Supporting the establishment and development of SMEs; marketing and clustering in order to support the distribution of innovative products; rehabilitation of unused polluted industrial sites etc.

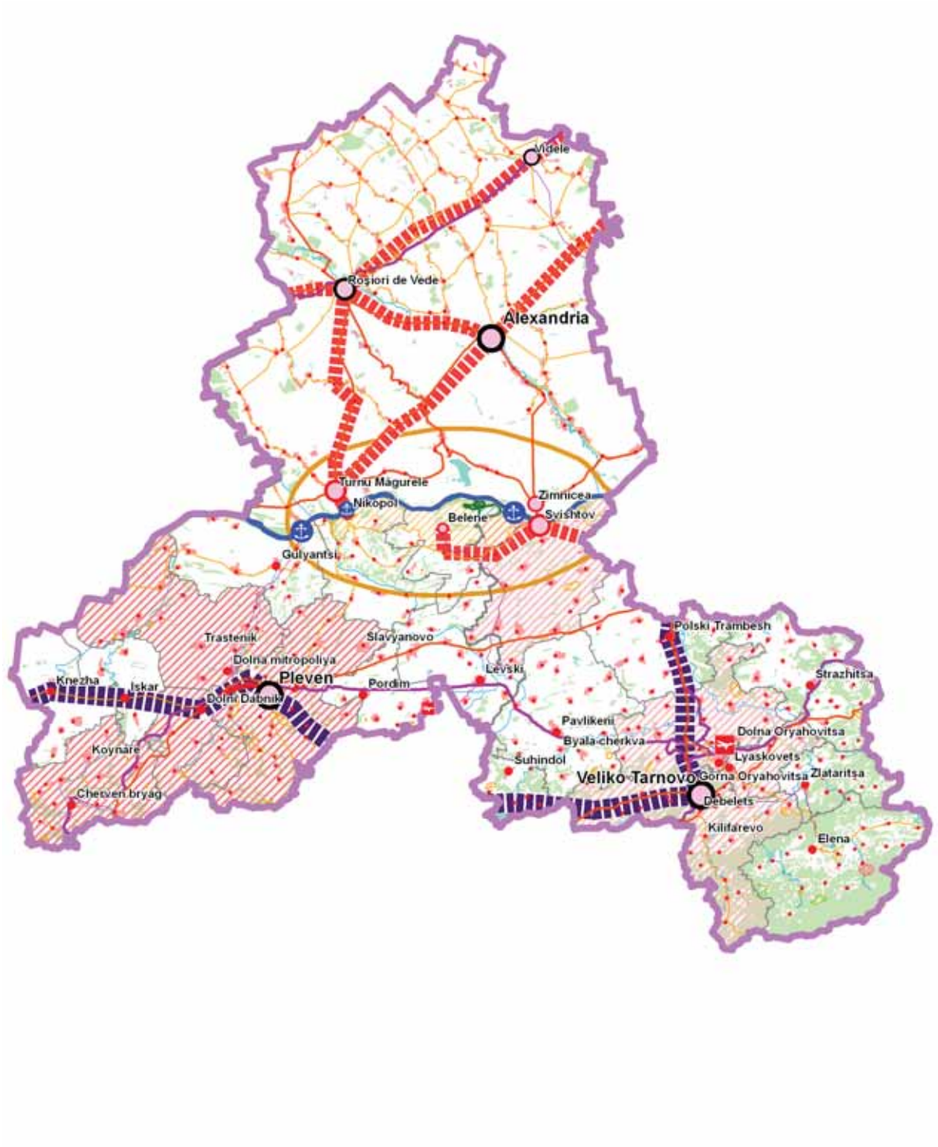
P13.3: Development and diversification of rural economy

M: Support for farmers and entrepreneurs in rural areas; establishment of agricultural producers groups; training of farmers; modernization of agricultural holdings etc.

P 13.4: Tourism development and promotion

M: Rehabilitation of tourist and cultural sites; the inclusion of new resources in tourist circuit; development of tourism infrastructure, of rural tourism etc.

Graph 64: E indicators status in 2020

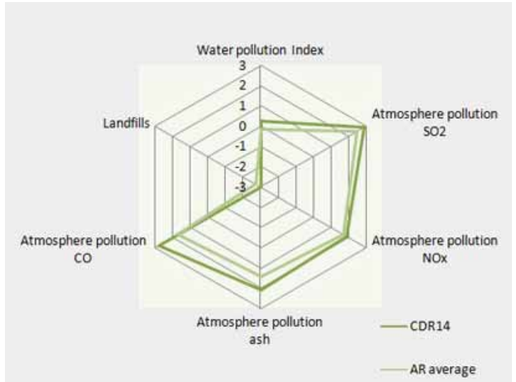


SWOT analysis

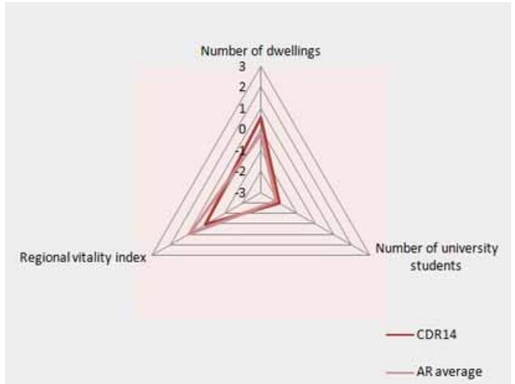
GS	Strengths	Weaknesses
NC	Productive agricultural areas Rich natural wealth Rich biodiversity Developed water supply and irrigation networks Natural unpolluted areas	High vulnerability of protected territories Pollution of the tributaries of rivers Old pollution from large scale industrial pollution Massive afforestation Flood risk
SSHR	Relatively younger population Presence of esteemed higher education facilities Good provision of public housing Rich cultural and historical heritage High educational level	Strong negative natural growth Higher unemployment rate Aged population Depreciated urbanized environment Week quality of habitation
TTI	Presence of two ferries Presence of the international airport Presence of several ports Container terminal in Svishtov Utilized RES Well-developed gas transmission and gas distribution network	Absence of highways and high speed roads Low value of railroad and public roads density Low accessibility to priority transport axes Electricity power distribution network is physically and morally depreciated Improperly state of the technical infrastructure Limited access to the gas distribution network
E	Available favourable conditions for agriculture Long outlet to the Danube River Available and actively working scientific research institutes Presence of foreign investors Favorable conditions for pisciculture	Ageing workforce Lack of available risk capital High concentration of accommodation establishments Low productivity Low level of research and development
GS	Opportunities	Threats
NC	Development of eco tourism Rehabilitation of industrial sites Promoting the agro-tourism Public ecological education	Flood threat The solid fuels use to the heating of rural areas Soils degrading and water pollution due to obsolete technologies in oil exploitation
SSHR	Regeneration of already urbanized areas Socialization of cultural and historical heritage Development of partnerships for cross-border cooperation Improvement the social infrastructure in rural area	Ageing of the population Insufficient degree of decentralization Strong national and international competition Migration of the population towards Bucharest
TTI	Construction of highway „Hemus“ and fast road link to Port of Svishtov Maintenance and development of road infrastructure Completion and repair of water supply network Development of transport and electricity infrastructure in border area Development of the naval infrastructure on the Danube	Delay of the modernization of railway infrastructure Underestimation of the potential of the water transport Lack of economic efficiency for gasification of other municipalities Limited Internet access for small settlements Slow modernization of Turnu Magurele and Zimnicea ports
E	Expansion of business services sector Development of craft centres and communities Development of local attraction sites Preparation and introduction of combined tourist products	Lack of proactive and qualified entrepreneurs Absence of concrete tourism-related initiatives Increasing of the number of dismissed employees Migration of qualified labour force

The CDR No.14 Turnu Magurele – Svishtov lies on the territory of two countries (Romania, Bulgaria). It consists of three NUTS3 regions (Judetul Teleorman, Pleven, Veliko Tarnovo). Total area is 15 082 km².

Graph 65



Graph 66



CDR Strategy

General Scheme: Natural Conditions

Global objective: Minimizing environmental pollution

SO 1: Air quality

P 1.1: Reducing air pollution

M: Reducing air pollution, Projects for low emission transport, Control, monitoring and prevention of cross-boundary pollution

SO 2: Waste management

P 2.1: Minimizing the amount of waste

M: Implementation regional landfills, Completing recultivation of all old municipal landfills, Introduction of systems for centralized collection of waste, Realization of zonal incinerators

SO 3: Water management

P 3.1: Reducing water pollution

M: Completion of the extension of water distribution networks, rehabilitation of water treatment plants, Reducing the impact of oil pollution on surface water, Preventing and combating pollution of groundwater.

SO 4: Sustainable land use

P 4.1: Sustainable use of agricultural land and forests in the CDR

M: Monitoring and long-term protection of soils, Environmental assessments of development projects, Projects for protection of forests.

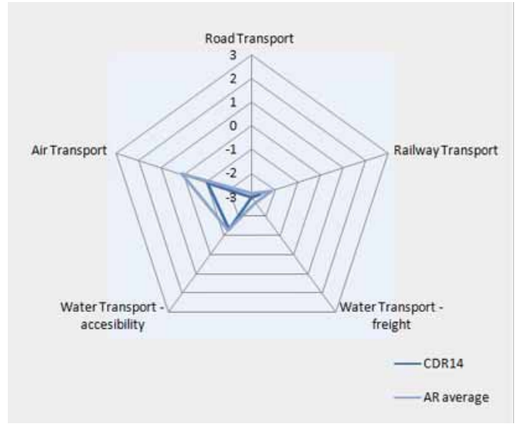
SO 5: Biodiversity Protection

P 5.1: Preservation of protected territories in the CDR

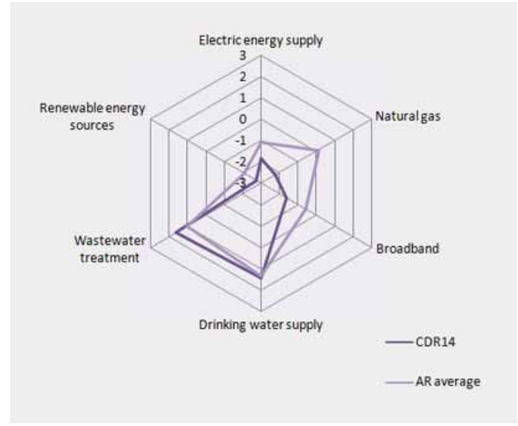
M: Elaboration/updating of management plans for all protected territories, Attracting additional financing using municipal and private funds, Cross-border cooperation.

P 5.2: Long term biodiversity protection

Graph 67



Graph 68



M: Cross-border and international programs, Adaptation to climate change, Projects for ensuring local financing by "pay for ecosystem services" schemes.

SO 6: Development of Renewable Energy Sources (RES)

P 6.1: Utilizing the RES potential of the CDR

M: Projects for measurement and identification of the potential for development of RES, Development of a regional plan for RES development, Projects for cross-boundary cooperation in the RES area, Gasification of settlements and industry

SO 7: Effective Risk Management

P 7.1: Management of Risks from Accidents and Natural Disasters

M: Ensuring adequate capacity and equipment for fast response to industrial and transport accidents and emergencies, Preparation and updating of analyses on drought and flooding risks

Graph 65: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Reducing social and territorial disparities and improving wealth and quality of life of the population

SO 8: Development of human and social capital of the region

P 8.1: Reducing imbalances and increasing social inclusion

M: Modernisation of the regional and local social assistance and child protection, Improvement of the quality of existing social services, Improved access to quality health services.

P 8.2: Recovery of human capital

M: Improvement of educational infrastructure, Training and retraining for rural labour resource, Adapting education to labor market, Improving the qualification of teachers.

P 8.3: Amplification of the activities of the Economic academy "D. A. Tsenov", Svishtov and the Alexandria University

M: Detailed analysis of the needs of the regional labour force market, Stimuli for the student mobility, Amplification of the research activity.

P 8.4: Crossborder cooperation

M: Development of a common labour market, Joint initiatives of the type “people to people”, Join initiatives for synchronisation of socio-economic and spatial planning.

SO 9: Adequate management and development of the built environment, spatial structure and public property within the region

P 9.1: Strategic and planning instruments

M: Elaboration of effective instruments of the spatial planning, Elaboration of strategies for public property management.

P 9.2: Specific intervention in the built environment and public property

M: Renovation of housing, Improvement of the characteristics of public space, Improvement of the social infrastructure, Regeneration of brownfield sites.

Graph 66: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Strengthening infrastructure for a balanced development

SO 10: Creating the necessary transport infrastructure and supporting the intermodal accessibility

P 10.1: Improve existing conditions for cross-border transport at level cross-border region

M: Improving the transport infrastructure, Improving cross-border mobility, Completion of the “Hemus” highway.

P 10.2: Development of road infrastructure

M: Building of a high-speed road, Building of a “ Danube scenic route “, Rehabilitation and repair of second-class road, Construction of the highway Bucharest-Craiova-Timisoara.

P 10.3: Improving the rail network

M: Rehabilitation of railways, Development of railroad infrastructure in crossborder area, Development the multi-modal transport network.

SO 11: Water and air transport

P 11.1: Development and modernization of the river transport network and ports infrastructure

M: Improving conditions for navigation on the Danube, Construction and reconstruction of infrastructure of the port of Nikopol, Modernization the port infrastructure.

P 11.2: Development of air transport

M: Construction of an airport in Teleorman and Giurgiu county, Development of a multimodal cargo and passenger platform in the proposed airport.

SO 12: Development of energy systems, exploiting the local potential

P 12.1: Extension and rehabilitation of electricity networks, improving the energy balance

M: Utilization of the energy potential of the Danube, Expansion of the national electricity transfer system, Promotion of the use of RES, Extension and modernization of transmission and distribution of electricity.

P 12.2: Modernization and improvement of heat networks and installations

M: Rehabilitation of centralized heat supply in urban areas, Extension of district heating infrastructure, Improving the effectiveness of existing heating.

P 12.3: Improving accessibility to new resources - Gas and Oil Supply and Distribution

M: Construction of gas transmission lines, Development and rehabilitation of the National Gas Transmission System, Increasing the capacity of gas underground warehouses.

SO 13: Further development and modernization of the communication infrastructure

P 13.1: Accelerate the modernization of telecommunications networks

M: Introduction of new technologies, Improving communication infrastructure, Improving public access to information, Using online services for government and business sector.

P 13.2: Infrastructure for small settlements

M: Expansion of telephone networks in the settlements, Broadband access in sparsely populated settlements and rural areas, Improving service quality.

SO 14: Improvement of water supply and sewerage systems

P 14.1: Renovation of the water supply infrastructure in settlements

M: Rehabilitation and modernization of existing systems for drinking water supply, Ensuring the quality of drinking water, Rehabilitation/implementation of drinking water treatment plants.

P 14.2: Improving the parameters of the system for collection and disposal of wastewater

M: Completion and rehabilitation of sewerage infrastructure, Construction of new wastewater treatment plants and facilities, Sustainable development of networks and sewage water treatment plants, Recovery of the Danube River in cross-border partnership.

Graph 67: T indicators status in 2020
Graph 68: TI indicators status in 2020

General Scheme: Economy

Global objective: Rebuilding the local economy

SO 15: Industry development

P 15.1: Supporting the industry

M: Modernization for industrial production growth, Programs for the promotion of industrial parks, Industrial reconversion, Mapping of land and resources of interest to investors.

SO 16: Increasing the competitiveness in agriculture

P 16.1: Increasing agricultural productivity

M: Stimulate the association of farmers and producers groups, Promotion of traditional agricultural products, Attracting investments for modernization of farms, Development of research in agri-food industry.

P 16.2: Sustainable rural development

M: Development of micro and craft, Stimulation of investments to improve agricultural and forestry infrastructure, Support for farmers and entrepreneurs in rural areas, Promoting tourism and agro-tourism.

SO 17: Developing the business environment

P 17.1: Support for creation of individual and small business initiatives

M: Develop craft centers and communities, Expand the sector of business services, Develop and promote local attractions Encourage the development of IT services.

SO 18: Strengthening cross-border cooperation

P 18.1: Economic potential Increasing accessibility, exchange of technologies and know-how between Bulgaria and Romania in industry and agriculture

M: Develop partnership activities, Ensuring complementarity between industrial technologies, Supporting trade in agriculture, A bilateral initiative for establishing local identity.

P 18.2: Partnerships

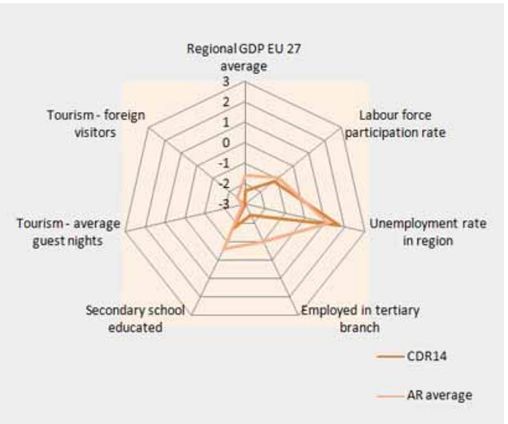
M: Development of a cross-border business center and clusters, Encourage association initiatives between Romanian and Bulgarian partners, Partnerships and international projects in education and touristic sector.

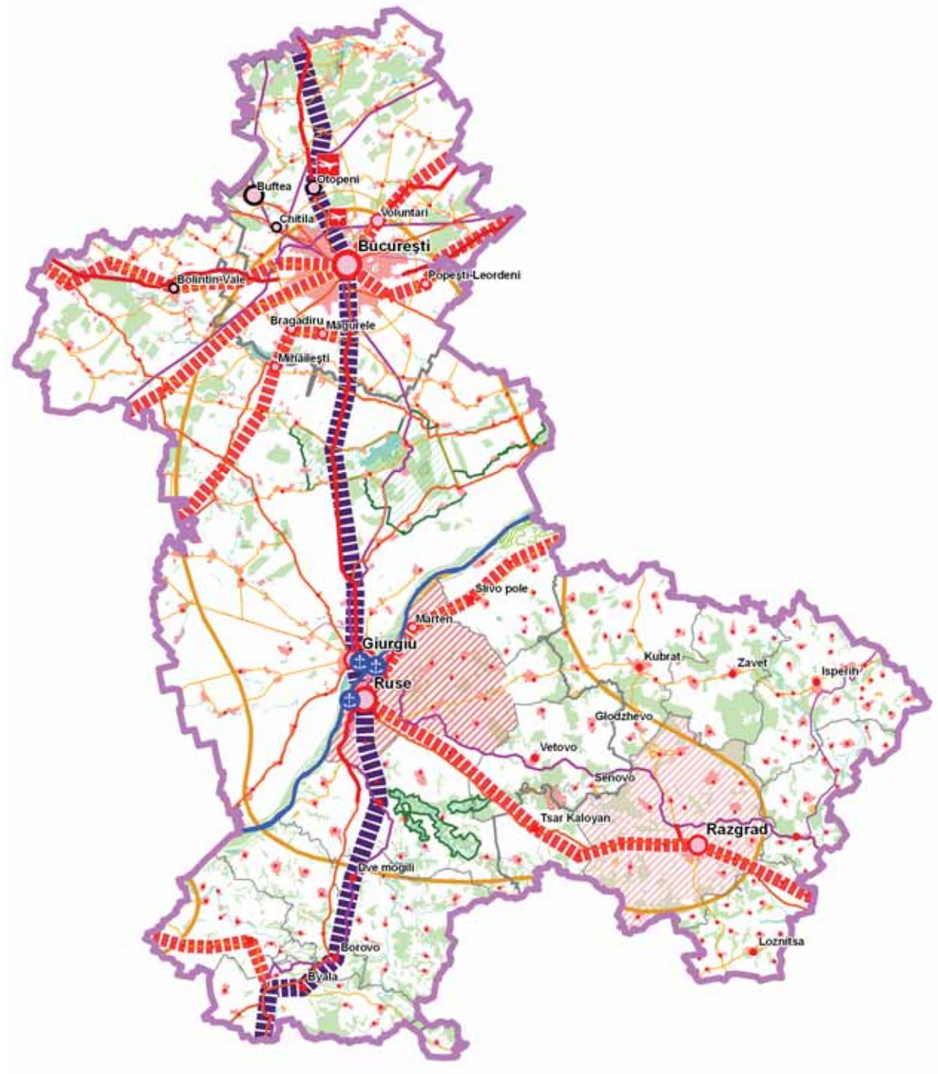
P 18.3: Common use of Danube River

M: Joint exploitation of the potential for producing energy from renewable sources.

Graph 69: E indicators status in 2020

Graph 69



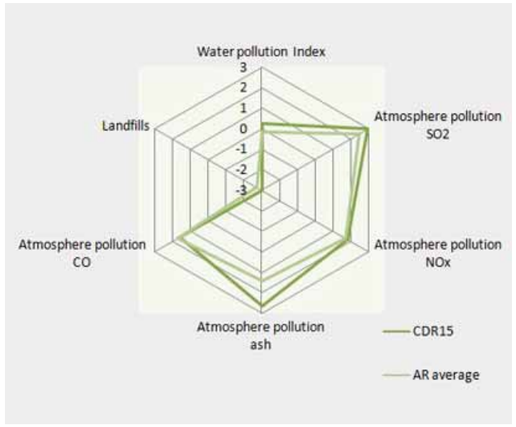


SWOT analysis

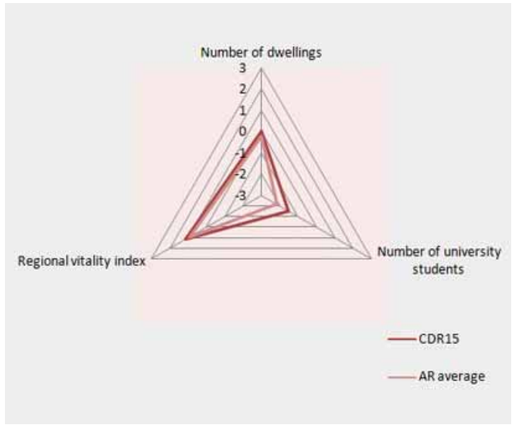
GS	Strengths	Weaknesses
NC	Numerous water resources, water surfaces Productive agricultural areas with rich soil Developed water supply and irrigation networks in the Bulgarian side of CDR Presence of monitoring systems used to assess	Low biodiversity and small areas covered by forests in Ilfov county Seismic and flood risks, extreme phenomena Soil pollution in Ilfov and Giurgiu counties Air pollution in Bucharest municipality and Ruse district
SSHR	Good provision of public housing Well developed education and health infrastructure in urban area Qualified human resources in high-tech	Labor exodus in Romanian CDR to Bucharest Rural poverty, poor social services in rural areas, social exclusion for gypsy population Incapacity of local administrations to access structural funds
TTI	Bucharest - the most important national transport node Good accessibility and multimodal transport Presence of Giurgiu port and Ruse port complex All settlements are supplied with water in the Bulgarian side	Absence of highways and high speed roads in the Bulgarian part of CDR Deficiencies in drinking water supply, high percentage of water losses Underdeveloped sewerage network, especially in rural areas
E	High levels of GDP, activity rate and employment in the proximity of the big cities of the region Rapid development of residential areas Cross-border economic cooperation	Large economic disparities between different parts of the region Insufficient promotion of the touristic potential of the CDR Aged labor force in rural areas
GS	Opportunities	Threats
NC	Declaring new NATURA 2000 sites, expansion of green areas, ecological rehabilitation low industrial pollution in Giurgiu county Implementation of existing cross-border cooperation programs for environmental protection and conservation	Low level of biodiversity protection, landscape and biodiversity damage Unreasonably use of fertilizers and plants health products Pollution due to electricity production from conventional sources in Giurgiu county Cross-border air pollution
SSHR	Potential of the research and development activity in agriculture in Giurgiu county Protection, preservation and expansion of green areas in cities and near cities Strengthening of the interdependence of local networks on both sides of the border	Population ageing, progressive depopulation of rural areas Deterioration of historical buildings with heritage value Drop of the average and high levels of workforce education in Giurgiu county Increasing gap between urban and rural environments Increasing costs of public services
TTI	Implementing the projects concerning the modernization of Giurgiu port Finalization of the highway Bucharest-Giurgiu Re-establishment and finalization of the channel Bucharest - Danube Construction of an airport in Giurgiu county	Insufficient absorption of EU funds in transport and technical infrastructure Construction of Calafat-Vidin bridge will reduce the road and railroad traffic in the Giurgiu border crossing point Delay in the connection of Giurgiu county at the gas network
E	Important agricultural potential The implementation of the Danube's Strategy Rehabilitation of industrial sites Development of tourism on the Danube, construction of tourist ports and pontoons	Economic crises leading to an increase in unemployment rate and decreaseof living standards Maintaining the current low level of infrastructure Risk of moving the location of some industrial sectors towards cheaper locations

The CDR No.15: Bucuresti - Giurgiu - Ruse - Razgrad lies on the territory of two countries (Bulgaria and Romania). It consists of five NUTS3 regions (Ruse and Razgrad Districts, Giurgiu and Ilfov Counties, Bucharest municipality). Its total area is 10 628 km².

Graph 70



Graph 71



CDR Strategy

General Scheme: Natural Conditions

Global objective: Protection of natural environment

SO 1: Protection of nature and landscapes

P 1.1: Sustainable agricultural land use and forest management

M: Protection of the quality of agricultural land and soils; promoting sustainable agriculture; stopping forest loss; new tree planting; new forest functions etc.

P1.2: Preserving biodiversity

M: increasing the area of protected territories; effective management of protected areas; raising public awareness; etc.

SO 2: Improving the quality of environment

P 2.1: Improving air quality

M: Improving air quality in settlements; reduction of air pollution from agriculture and cross-border air pollution; clean industries etc.

P2.2: Water management

M: Drinking water supply, municipal and industrial wastewater treatment; improving condition of the Danube water and surface bodies etc.

P2.3: Soil protection

M: Non-intensive sustainable agricultural practices; selection of adequate crops; protecting soils from contamination etc.

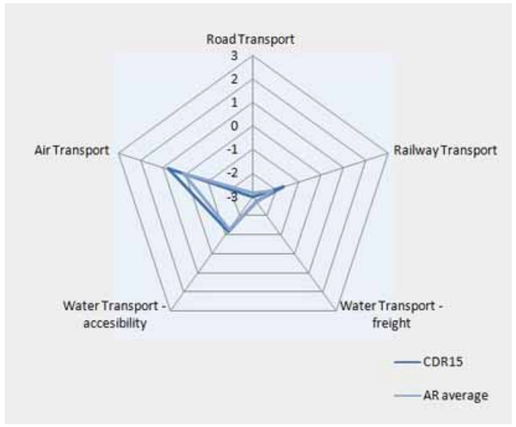
P2.4: Waste management

M: Construction of adequate infrastructure for the management of MSW and for centralized waste collection; restoration of municipal landfills; etc.

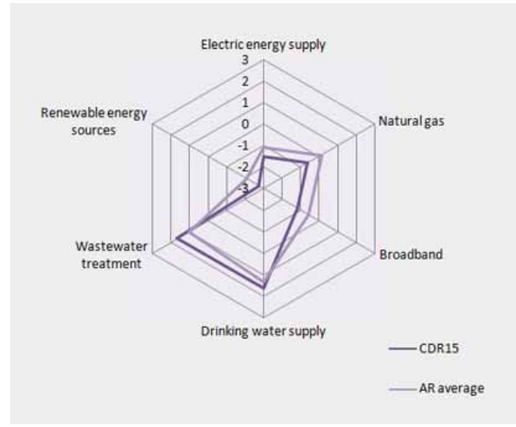
SO3: Risk management

P3.1: management of natural and accidental risks

Graph 72



Graph 73



M: Effective management of risk of accidents, floods and other natural disasters.

Graph 70: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Improved quality of life

SO 4: Improvement of the demographic situation

P 4.1: Social protection, education and health

M: Economic incentives for young families; securing financing for schools; improving the accessibility of university education etc.

SO 5: Strengthening cross-border partnership

P 5.1: Promoting the potential of the Giurgiu-Ruse region

M: Developing joint programs; improving the transport accessibility; connecting the systems of infrastructure etc.

SO 6: Improving the urban structure and building a modern living environment

P6.1: Improving the urban environment

M: Preparing strategies; ensuring a high provision of social housing; renovating obsolete industrial areas etc.

SO 7: Providing appropriate conditions for the development of the region's economy

P 7.1: Development of tourism and industry

M: improving tourism infrastructure; developing a market strategy to promote an integrated tourism product of the region; full exploitation of tourism opportunities etc.

Graph 71: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Increased accessibility in the region

SO 8: Integrating the transport system into the European transport network

P 8.1: Road network

M: improving cross-border accessibility and mobility; developing and modernizing the roads accessing the European transport corridors etc.

P 8.2: Railway network

M: Modernization of railway infrastructure of European and regional importance etc;

P 8.3: Water transport

M: Improving navigation conditions on the Danube; developing intermodal transport etc.

P 8.4: Air transport

M: Design a master plan for Ruse airport; modernization of roads (E70) and railroads (on Bucharest-Otopeni segment); construction of a new airport in Giurgiu county etc.

Graph 72: T indicators status in 2020

SO9: Development of electrical and thermal networks, use of alternative energy resources

P9.1: Development of electric power networks and installations

M: Utilization of new resources; modernization of networks and facilities to protect the environment etc.

P9.2: Heat transport and distribution

M: Modernization and expansion of district heating infrastructure in both urban and rural areas; adequate energy prices; construction of gas supply networks etc.

SO 10: Modernization of post and telecommunications

P10.1: Postal and telecommunication services

M: Intensive development of broadband infrastructure; broadband access in sparsely populated settlements in rural areas; support for SMEs and business etc.

SO 11: Expansion and rehabilitation of water networks

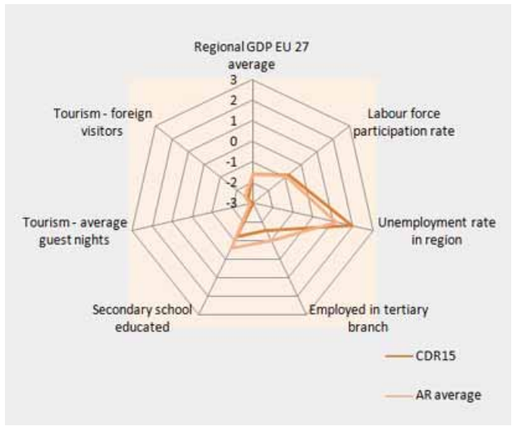
P11.1: Water supply and wastewater sewerage

M: Rehabilitation and modernization of existing systems; construction of treatment plants; repairing existing WWTP; construction of new WWTP in Ruse etc.

SO 12: Expansion of gas supply

P12.1: Gas and oil distribution

Graph 74



M: Accessing EU and national funds to develop the natural gas infrastructure; rehabilitation and expansion of existing natural gas distribution in Giurgiu municipality; etc.

Graph 73: TI indicators status in 2020

General Scheme: Economy

Global objective: Competitive, stable, healthy and diversified economic environment

SO 13: Establishing and implementing sustainable and profitable economic activities

P 13.1: Supporting the recovery of agricultural production

M: Diversification of agricultural production; implementing advanced agricultural techniques; support in establishing start-up SMEs; creation of farmers associations etc.

P 13.2: Business environment

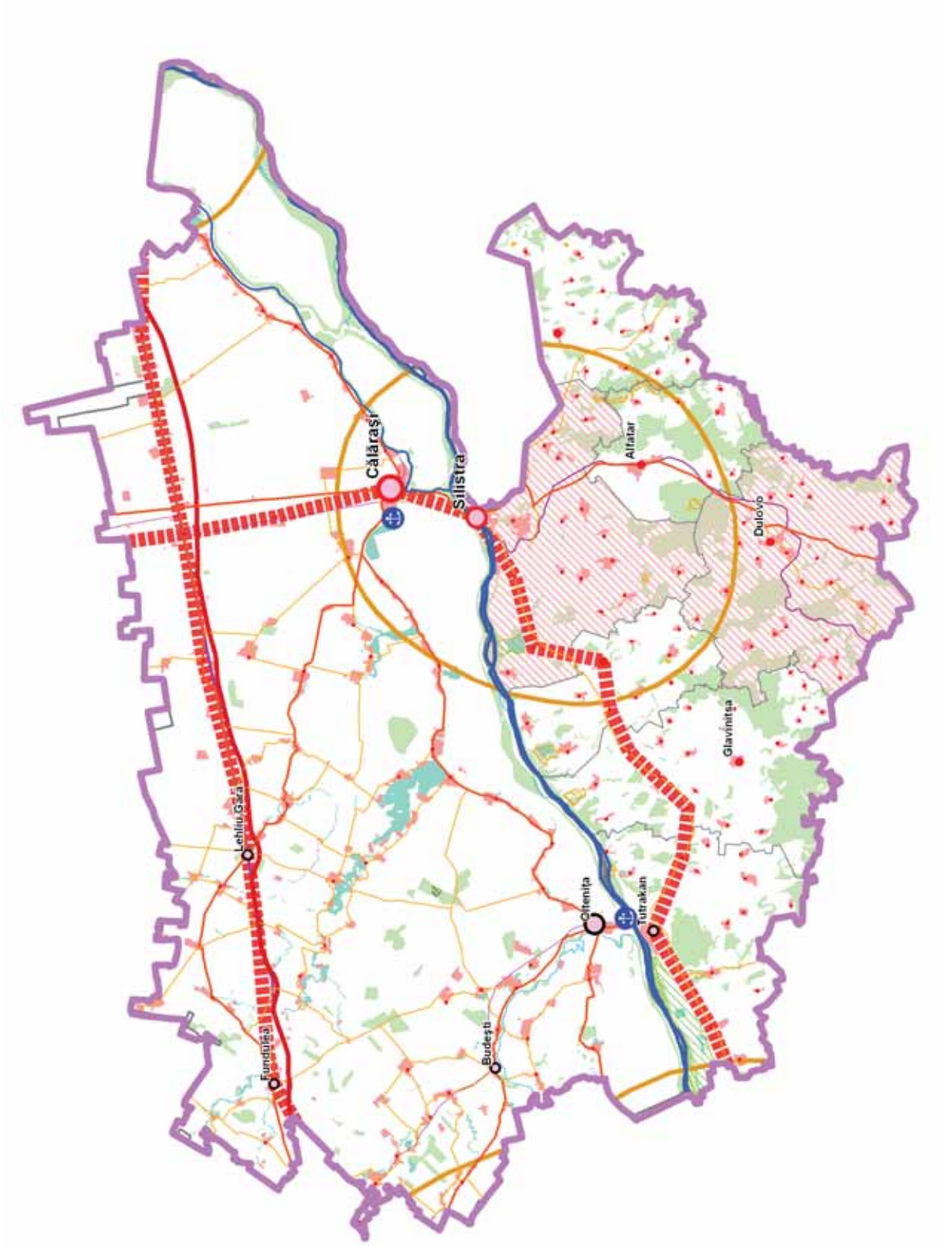
M: Promoting local investments and trade; developing partnership activities including CBC etc.

SO 14: Developing sustainable, attractive and profitable local tourism

P 14.1: Taking advantage of opportunities provided by the border area

M: Attracting new investments in Giurgiu-Ruse border area; developing and promoting local attractions, exhibitions, festivals; local and regional initiatives for local identity etc.

Graph 74: E indicators status in 2020

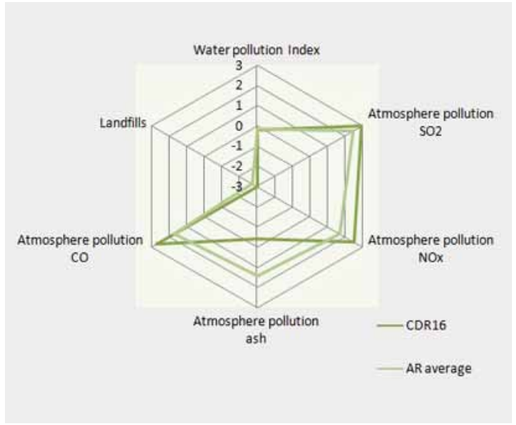


SWOT analysis

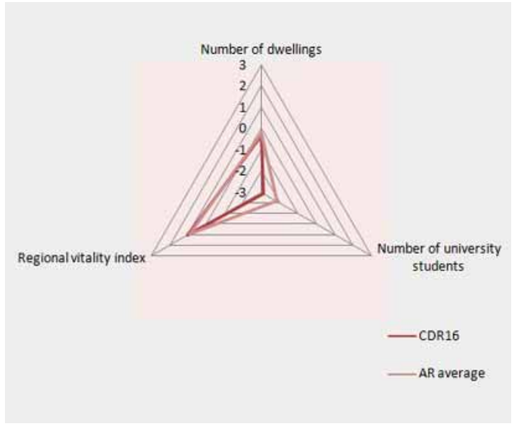
GS	Strengths	Weaknesses
NC	Low air, water and soil pollution Rich biodiversity Sufficient capacity of the regional waste landfill Good cooperation by the Bulgarian and Romanian side for management of flood risks Presence of protected areas	High vulnerability of protected areas Lack of significant forest areas and water resources Weak subsoil natural resources Lack of organized activity in rural sanitation Industrial pollution
SSHR	Trend to improve the education Well balanced dispersion structure of the settlement structure Good provision of public housing Housing program for young Active measures to stimulate employment	Strong negative natural growth Low Human Development Index Lack of commitment of settlement structures The large number of unemployed from rural areas The lack of highly qualified jobs
TTI	The density of the second-class road network Presence of the ferry terminal Existence of 2 Ports Well-constructed regional electrcity power grid Significant RES potential Developed telecommunication network	Lack of land PETC, TEN-T roads Railway infrastructure is with limited development Air transport is underdeveloped Large amortization of the water supply network The poor quality of water Lack of gas supply in rural areas
E	Available favourable conditions for agriculture Long outlet to the Danube River Cross-border tourism Foreign investments Natural and eco-tourism	Poor condition of basic infrastructure Ageing Low prevalent qualification of the workforce Low payment rate Lack of significant ore and other fossils
GS	Opportunities	Threats
NC	Cooperation with the Romanian side to reduce the risks and pollution Development of irrigation Redevelopment and investment in the former platform „SIDERCA“	Eutrophication and anthropogenic pollution of protected areas Flood threat Threats of cross-border air pollution from Romania
SSHR	Develop new housing and social housing Support for opening of new schools Retraining courses Urban population increasing	Ageing of the population Deepening imbalance between supply and demand in the labor market Migration to other areas of qualified teachers
TTI	Construction of bridge Silistra-Calarasi Improvement and development of road network Reconstruction of airport Silistra Repair of water supply network	Delay with building of the bridge Delay in the process of absorption of potential of RES Delay in construction of gas pipeline network Increased water losses and damages of the environment
E	Expansion of business services sector Improving access to surrounding areas and across borders Providing conditions for territorial attractiveness	Weak commitment of business and other public partners Lack of skilled and enterprising entrepreneurs Low prevalent qualification of the workforce Isolation and unattractiveness in peripheral areas

The CDR No.16 Calarasi - Silistra lies on the territory of two countries (Romania and Bulgaria). It consists of two NUTS3 regions (Calarasi and Silistra). Total area is 7 901 km².

Graph 75



Graph 76



CDR Strategy

General Scheme: Natural Conditions

Global objective: Expansion and modernization of environment protection

SO 1: Extension and modernization of water and wastewater systems

P 1.1: Improvement drinking water quality and of sewage systems in urban and rural areas

M: Completion of sewer systems and wastewater treatment plants, Construction of alternative economically-viable systems for wastewater treatment, Rehabilitation and expansion of distribution network

P 1.2: Improving the condition of water bodies in the CDR

M: Participation in cross-border projects to improve the chemical and ecological state of the Danube River, Projects for the improvement of the chemical and ecological condition of surface water bodies, Projects for monitoring of the pollution of groundwater bodies

SO 2: Implementation of the Integrated Waste Management System

P 2.1: Construction of ecological landfills

M: Landfill construction and closure of non-compliant waste landfills, Reducing the amount of household waste, Proper waste management in rural areas, Setting up selective collection points for recyclable waste for the recovery

SO 3: Reducing atmosphere pollution

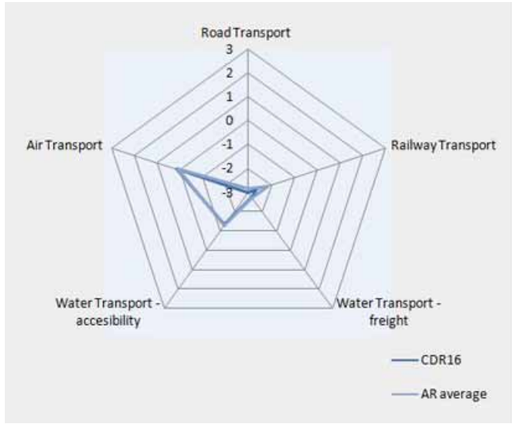
P 3.1: Identification of pollution sources and their reduction

M: Implementation of monitoring and management of air quality, Reducing and controlling pollution from road traffic, Using natural gas as fuel for residential heating and industrial applications.

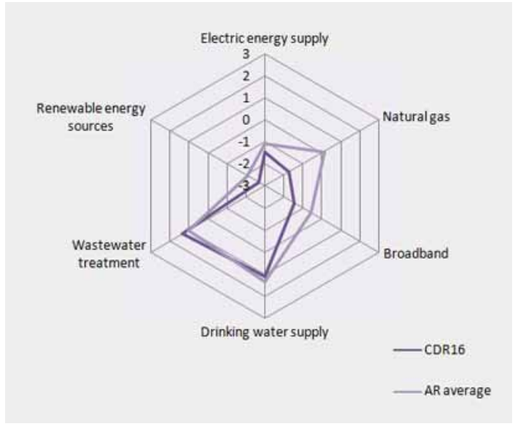
SO 4: Sustainable land use

P 4.1: Sustainable use of agricultural land and forests in the CDR

Graph 77



Graph 78



M: Monitoring and long-term protection of soils, Project to restore and enhance the ecological functions and ecosystem services on agricultural land, Projects for restoration of the forest wind belts.

SO 5: Biodiversity Protection

P 5.1: Preservation of protected territories in the CDR

M: Elaboration/updating of management plans for all protected territories, Raising public awareness regarding local habitats, Cross-border cooperation.

P 5.2: Long term biodiversity protection

M: Protection and restoration of the ecological corridors, Cross-border and international programs and projects for reintroduction of plant and animal species traditional for the area, Projects for ensuring local financing.

SO 6: Development of Renewable Energy Sources (RES)

P 6.1: Utilizing the RES potential of the CDR

M: Identification of the potential for development of different types of RES, Development of a regional plan for RES development, Projects for cross-boundary cooperation in the RES area.

SO 7: Effective Risk Management

P 7.1: Management of Risks from Accidents and Natural Disasters

M: Ensuring adequate capacity and equipment for fast response to industrial and transport accidents and emergencies, Preparation and updating of analyses on drought and flooding risks and potential damages on settlements, economic activities and the environment.

Graph 75: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Human capital development, balanced polycentric settlement structure and higher living standard

SO 8: Improvement of the demographic situation

P 8.1: Promoting and supporting the birth family

M: Economic stimuli for young families, Improving family planning.

P 8.2: Improvement in public health and quality of life

M: Improvement of public health through preventive care, Improving the material and personnel provision of health facilities, Improving the quality of life for senior citizens.

SO 9: Increasing educational level of residents

P 9.1: Improving the pre-schooling and schooling system

M: Securing financing for schools, Improving the qualification of teachers, Inclusion of vulnerable social groups into the educational system.

P 9.2: Improving access to higher education

M: Assisting students willing to pursue higher education, Improving the accessibility of university education.

P 9.3: Improving professional and career education and efficient use of labor potential

M: Upgrading and adapting the education and training at the new requirements of the labour market, Promoting social development programs, Introducing career education in schools and universities.

SO 10: Establishment and development of harmonious settlement network

P 10.1: Updating and development of multi functional structure of the settlement network

M: Intensification of urban spatial relationships between networks on both sides of the border, Strengthening inter-regional cooperation.

P 10.2: Overcoming the existing model "centre-periphery"

M: Overcoming the peripheral nature of the frontier territory of CDR, Making the self-area of the CDR in a kind of centre.

P 10.3: Development of villages and rural areas

M: Improving the attractiveness of rural communities for living and business, Diversify activities in rural areas.

SO 11: Promoting Urban Development, through the implementation of an integrated approach to planning for urban regeneration and development

P 11.1: Creating and ensuring high quality public spaces and built environment and high living standards

M: Implementation of national program for reconstruction of housing fund, Improvement of housing fund and public works within residential areas, Improvement of living conditions in Roma neighbourhoods and districts.

P 11.2: Preservation, maintenance and socialisation of cultural heritage, green system and built environment

M: Protection, conservation and socialization of cultural heritage, Preservation and restoration of traditional architectural heritage and improving the urban landscape, Rehabilitation of public green areas - parks and gardens, playgrounds and related facilities.

Graph 76: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Improving conditions for cross-border cooperation by improving transport and technical infrastructure

SO 12: Modernization of road infrastructure

P 12.1: Improving existing conditions for cross-border transport in CDR

M: Construction of a combined bridge for road and railway transport "Silistra-Calarasi", Construction of ferry Tutrakan-Oltenitsa, Reconstruction of road I-7 for rapid connection to the highway "Hemus".

P 12.2: Modernization of roads network - improving accessibility and mobility in the CDR

M: Building of a "Danube scenic route", Repair and maintenance of road II-71 Silistra-Dobrich, Danube Bike Lane development, Highway Calarasi-Braila-Galati towards Bulgaria.

P 12.3: Development and modernization of the rail network

M: Modernization and development of railroad infrastructure and stations, Construction of multi-modal transport network.

SO 13: Water and air transport

P 13.1: Development and modernization of the river transport network and ports infrastructure

M: Improving conditions for navigation on the Danube, Modernization of the infrastructure of the port of Silistra, Construction of a terminal of combined transport in Calarasi, Creating multimodal transport corridors in the ports area.

P 13.2: Development of air transport, increasing the access to international airports

M: Reconstruction of road I-7 „Silistra –Shumen", Ringroads around urban centres, Construction of an airport in Adunatii Copaceni, Rehabilitation and reconstruction of airport Silistra.

SO 14: Development and optimization of energy networks and resources

P 14.1: Optimization of resources

M: Absorption of energy potential of the Danube, Promoting the use of solar energy and agricultural biomass, Increasing energy efficiency.

P 14.2: Reliable and quality electricity supply

M: Construction of new electricity power generations, Construction of new power lines, Expansion and reconstruction of electricity supply.

P 14.3: Gas and Oil supply and distribution

M: Construction of gas distribution network – Distribution gas pipeline Dobrich - Silistra, Construction of gas supply networks.

SO 15: Further development and modernization of communication infrastructure

P 15.1: Modernization of communication infrastructure with providing access to global network

M: Improving communication infrastructure, Improving the quality of public services, Increasing digitization of telecommunications networks, supporting SMEs and businesses in the development of modern telecommunications networks.

P 15.2: Development of TC infrastructure for small settlements

M: Expansion of telephone networks in the settlements, Broadband access in sparsely populated settlements and rural areas, Increase the accessibility of coverage in the border area.

SO 16: Efficient management and protection of water resources

P 16.1: Improving the water supply of settlements

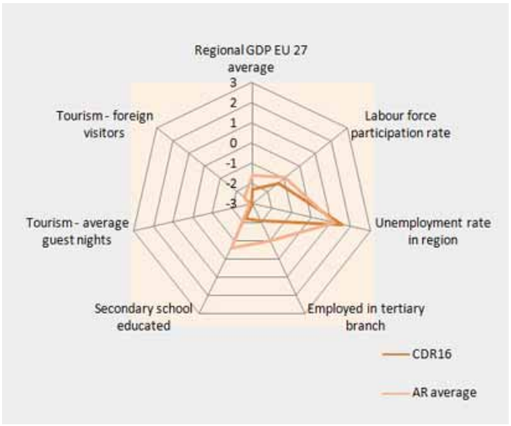
M: Building and rehabilitation of infrastructure for supply of drinking water, Replacement of depreciated water supply equipment and water loss reduction, Rehabilitation and improvement of water supply.

P 16.2: Improving the system for collection and disposal of wastewater

M: Completing the underdeveloped sewerage infrastructure, Construction of treatment plants and wastewater facilities, Implementation of integrated water-sewer projects.

Graph 77: T indicators status in 2020
Graph 78: TI indicators status in 2020

Graph 79



General Scheme: Economy

Global objective: Improved economic performance of the CDR

SO 17: Development and modernization of the infrastructure

P 17.1: Providing basic infrastructure for a sustainable economic development

M: Development and modernization of transport and port infrastructure, public utilities, communication and IT infrastructures, Modernization of social infrastructure.

SO 18: Economic competitiveness

P 18.1: Business development

M: Development of business infrastructure, Expand the sector of business services, Support in establishing and developing start-up SMEs, Stimulating investment and promoting local products and services, Development of tourism infrastructure, Cross-border cooperation.

SO 19: Rural development

P 19.1: Sustainable farming

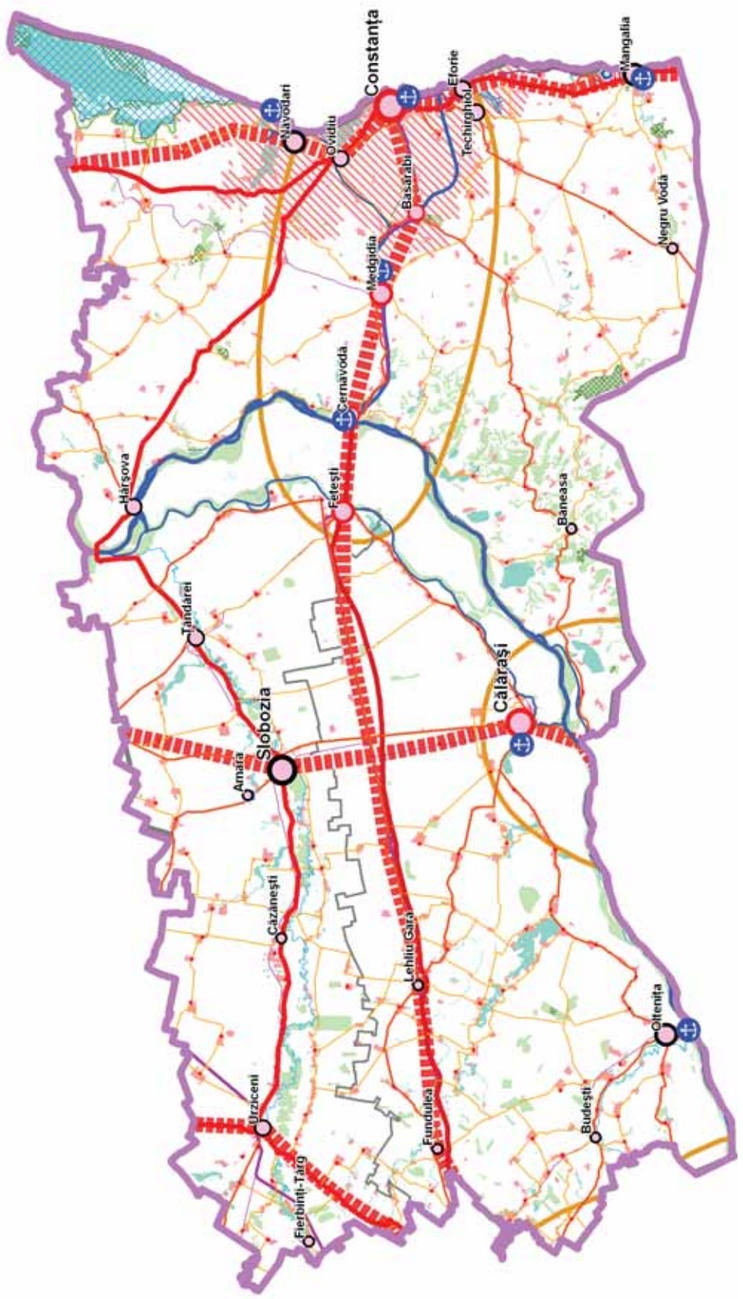
M: Increasing the competitiveness of agriculture, Improvement of rural environment, Diversification of rural economy, Support to farmers and entrepreneurs in rural areas.

SO 20: Development of human resources, efficient use of labour resources

P 20.1: A modern and flexible labour market

M: Adaptation of education and training to new labour market requirements, Promotion of active policies for employment and social development.

Graph 79: E indicators status in 2020

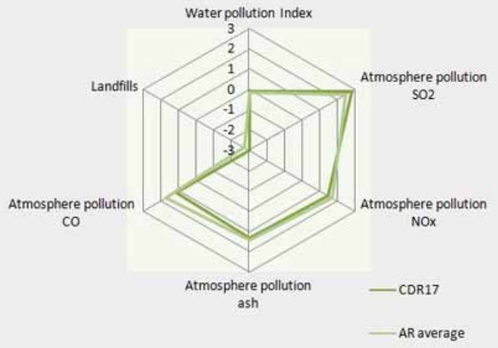


SWOT analysis

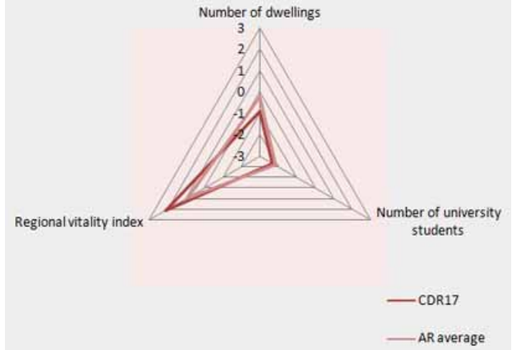
GS	Strengths	Weaknesses
NC	Danube Delta Biosphere Reserve, Black Sea, Danube, protected natural areas, RAMSAR sites High energetic potential from renewal resources Important historical identity (presence of historical and archaeological monuments).	Few forest areas Black Sea and Danube pollution due to oil products Intensely road traffic in the proximity of natural protected areas Lack of protective green belts
SSHR	Constanta Municipality, the main economic pole in the Black Sea region The population density is above the national average A multi-ethnic space, lack of inter-ethnic conflicts	Slightly population decreasing Life expectancy is below the national average Social exclusion of gipsy population Lack of infrastructure for business tourism Low share of population with high education
TTI	Key position to road, rail, water and air transport Constanta harbor, the International airport Mihail Kogalniceanu and utility airport Tuzla The A2 Highway Bucuresti-Constanta Existent system of waste integrated management Relatively close to the Bucharest airport - Henri Coanda	Inappropriate state of local roads Lack of ring roads in urban area Low accessibility in some areas A still low degree of utilization of renewable resources Accessing funds from the Transport Operational Plan in a very low percentage
E	Strategic position around Black Sea area High level of foreign direct investments Rapid ascension of the service sector The existence of strategic investors in the area	Business infrastructure is poorly developed Low agricultural productivity Destruction of irrigation systems Insufficient operated public-private partnerships
GS	Opportunities	Threats
NC	Accessing EU and national funds in environment programs Extension of protected areas Development of aquaculture Modernization of wastewater treatment stations	Climate change, the increasing of “deserted land” phenomena Degradation of the old arm of the Danube Excessive development of constructions Un-controlled tourism
SSHR	Accessing EU and national funds in human resources field, health, culture and education infrastructure The cultural, historical and archaeological heritage Cross-border cooperation in social field	Low accessing of EU funds Degradation of social infrastructure due to economic crises Decreasing of birth rate, especially in rural area Increasing poverty
TTI	The Danube-Black Sea Channel Finalization of the highway Bucuresti-Constanta Investments in nuclear energy (in reactors 3 and 4 from Cernavoda) Very high tourist potential	Lack of adequate infrastructure for cruise tourism (ports) Insufficient absorption of EU funds Increasing urban traffic jams Drastic reduction in resources for financing investment objectives
E	Accessing European funds to support SMEs Projects in the field of oil exploitation in the seacoast area Support for wine-growing farms Promotion of local, traditional food products	Maintaining the current low level of infrastructure Descendant trend of foreign investments Risk of moving the location of some industrial sectors towards external, cheaper locations

The CDR No.17 Fetesti - Cernavoda - Medgidia - Constanta lies on the territory of one country (Romania). It consists of three NUTS3 regions (Constanta, Calarasi and Ialomita Counties). Total area is 16 612 km².

Graph 80



Graph 81



CDR Strategy

General Scheme: Natural Conditions

Global objective: Environmental protection

SO 1: Water protection

P 1.1: Efficient management of drinking water and surface water

M: Consolidation of eroded banks of Danube's Borcea arm; stopping uncontrolled waste disposal in banks or beds of surface waters; rehabilitation of water supply systems etc.

SO 2: Air pollution

P 2.1: Improving air quality

M: Reducing air pollution from traffic and urban heating; promoting ecological transport and tourism; using alternative energy sources; publicity campaigns etc.

SO 3: Reducing soil, underground water and waste pollution

P 3.1: Soil and underground water management

M: Monitoring the factors that pollute the soil and groundwater; forest belts to reduce soil erosion; upgrading / building water treatment plants in urban and rural areas etc.

P 3.2: Waste management

M: Selective waste collection; increasing the recycling; providing specific equipments; building waste transfer stations; closing non-compliant landfills etc.

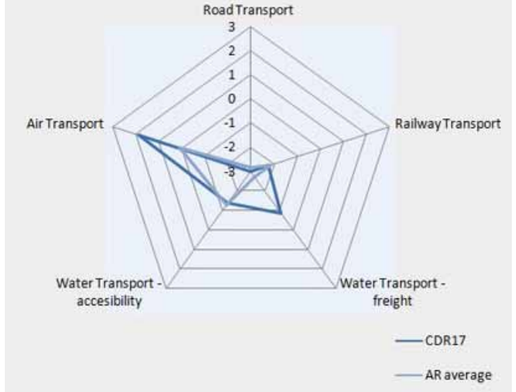
SO 4: Natural environment

P 4.1: Conserving biodiversity

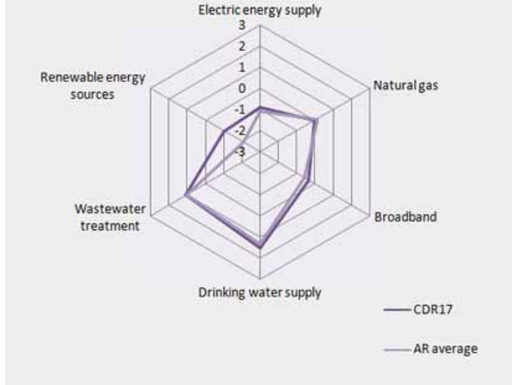
M: Increasing the area covered with forests; respecting the protected areas regime; promoting ecological agriculture, tourism, transport; ecological arrangements etc.

P 4.2: Environmental protection in urban areas

Graph 82



Graph 83



M: Reducing emissions from urban traffic; rehabilitation of public parks and green areas; creating vegetal protection belts to reduce pollution etc.

SO 5: Preventing climate change

P 5.1: Improving energy efficiency

M: Improved access to electricity from wind power; ecological reconstruction of degraded areas; using alternative energy sources for public lighting etc.

P 5.2: Reducing the risk of natural disasters

M: Construction of flood protection dams against floods; identification of the land at risks and its forest covering; construction and stabilization of lands at risks etc.

Graph 80: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Increasing the quality of life

SO 6: Improvement and rehabilitation of public services

P 6.1: Health and social care

M: building/rehabilitation of hospitals; improving health services; providing primary care in rural area; creating/ rehabilitating social services centers etc.

P6.2: Education and research

M: Rehabilitation, modernization of education units; establishing a technology research center; developing the human resources working in education etc.

P 6.3: Housing

M: Rehabilitating the blocks of flats; construction of new residential dwellings; development of integrated water and wastewater systems; etc.

Graph 81: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Modernization and development of the basic infrastructure

SO 7: Improving the quality of transport network

P 7.1: Road network

M: Using EU funds to rehabilitate national and local roads; completion of Cernavoda-Constanta section of the Bucharest-Constanta highway; expressways etc.

P 7.2: The railway network

M: Extension/modernization of multimodal platforms in maritime freight ports; railways rehabilitation; electrifying the railway Constanta-Mangalia etc.

P 7.3: The air transport

M: Upgrading M.Kogalniceanu Airport; completing the ring road around Constanta municipality; building expressways; connection to the European road and rail transport etc.

P 7.4: Port and intermodal transport

M: Developing/rehabilitating the Constanta harbor and other ports; building passenger terminals in Cernavoda port, tourist ports, ferry transportation; etc.

Graph 82: T indicators status in 2020

SO 8: Developing and upgrading electric and thermal power networks and facilities

P 8.1: Electrical networks and installations

M: Supplying all settlements and dwellings with electric power; expansion of wind parks; using solar energy; modernization of the electric system etc.

P 8.2: Heating supply and distribution

M: Modernization and expansion of district heating infrastructure in urban and rural areas; improving efficiency; implementing national programs etc.

SO 9: Telecommunications and postal services development

P 9.1: Extension and modernization of post and telecommunication systems

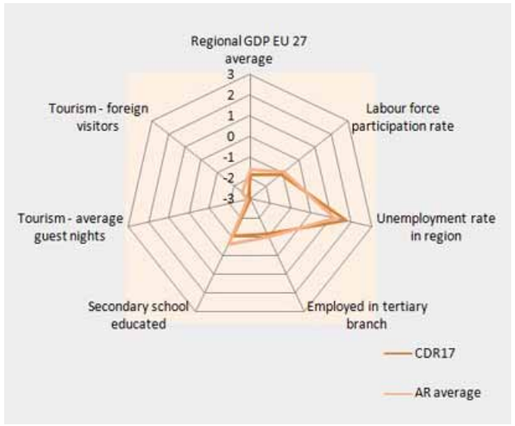
M: Improve the quality of services; extending the accessibility; professional training in IT; development of the infrastructure in disadvantaged areas etc,

SO 10: Extension/modernization of water supply and sewerage networks

P 10.1: Efficient water management

M: Extension and rehabilitation of water infrastructure; development of water supply and sewerage in most urban

Graph 84



areas until 2015; installing wastewater treatment plants etc;

SO 11: Gas and oil supply and distribution

P 11.1: Development of gas and oil networks

M: Rehabilitation of the transit gas pipeline Isaccea-Negru Voda, construction of 5 stations of gas compression along the pipeline; new point of gas import; natural gas supply in Isaccea town; extension of gas networks etc.

Graph 83: TI indicators status in 2020

General Scheme: Economy

Global objective: Efficient management of resources

SO 12: Long-term competitive and attractive region

P 12.1: Creating favorable conditions for investments

M: Supporting SMEs, innovation, partnerships; developing business infrastructure; exploiting the tourism potential; etc.

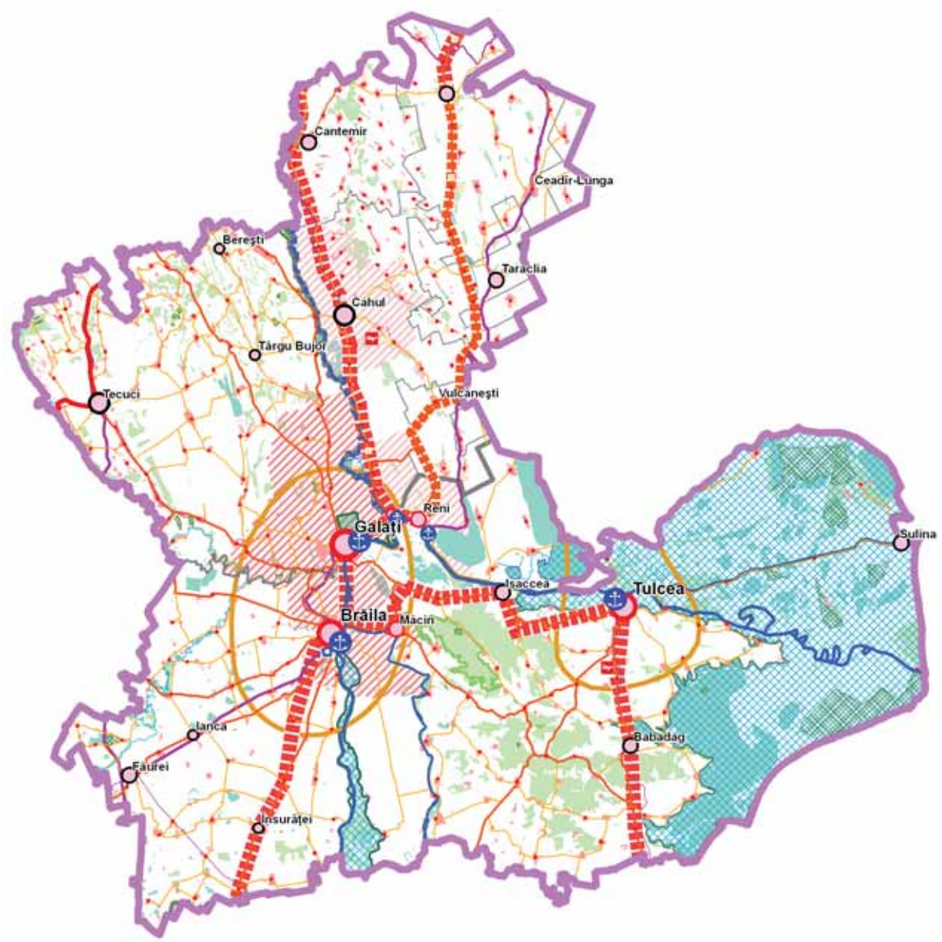
P 12.2: Modernizing rural economy

M: Developing and improving the basic infrastructure in rural area; modernization of fishing and its support-infrastructure; strengthening rural-urban links etc.

P12.3: Create conditions for a flexible workforce

M: Strategies and policies for professional training; improving the social services and the management of public administration; supporting investments; promote active employment measures etc.

Graph 84: E indicators status in 2020

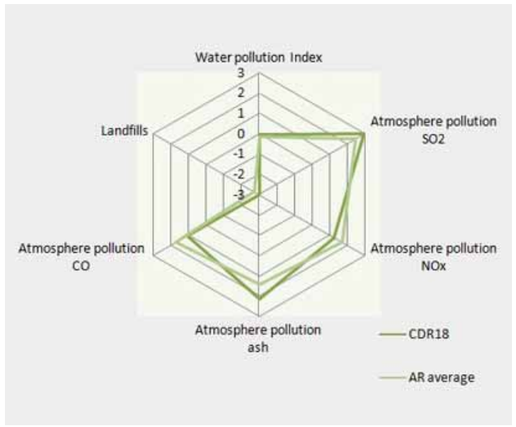


SWOT analysis

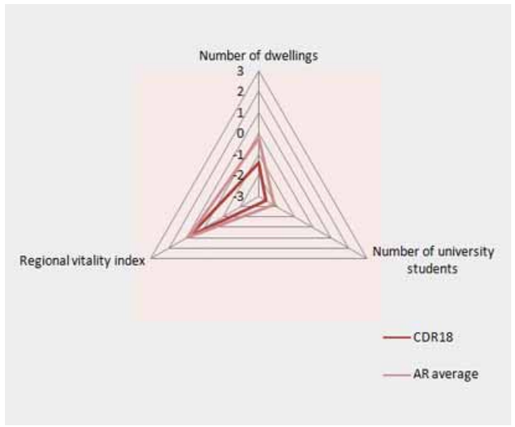
GS	Strengths	Weaknesses
NC	Varied landscape: the Danube Delta, the Black Sea, mountain areas, diverse aquatic and terrestrial flora and fauna High share of good quality farmland Touristic and cultural attractions in rural areas	Extreme climatic phenomena (snow storms, drought), floods, droughty terrains, banks erosion Biodiversity is endangered by uncontrolled tourism Critical areas of air, water and soil pollution, accidental pollutions
SSHR	A big variety of nationalities (diverse cultures, traditions and customs) Region is not overpopulated High level of population education (universities) 100% coverage with gas supply system in Ukrainean part	Population decreasing and ageing in Romanian and Ukrainean parts of CDR Lack of working offers for people with high education and for graduates Low quality of life in rural areas (low social services)
TTI	The ports and airports existent in the CDR Production of electric and thermal energy alSO from non-conventional sources (wind energy) Modernized national and European road networks in Romanian part of CDR An average density of primary and secondary roads in Moldavian part	Lack of a highway Many households without electric energy in the Danube Delta Inappropriate technical state of local roads Low transport accessibility in the Danube Delta area Deficient water supply, wastewater and sewage systems
E	Energetic and non-energetic natural resources Very high touristic, fishery and agricultural potential Development of aquaculture	High unemployment rate Very small foreign and national investments compared with the high economic potential of the area Low exploitation of the Danube's touristic potential
GS	Opportunities	Threats
NC	Implementation of the existing National and Local Action Plans for Environment and for Waste Management Development of cross-border tourism Construction and rehabilitation of water treatment stations	Poaching and excessive fishing Uncontrolled tourism Soils degradation due to erosion, salinization, landslides, floods, drought, acid rains High level of air pollution
SSHR	Development of Cantemir metropolitan area (Galati-Braila) Accessing European funds in human resources direction Professional reconversion for unemployed persons	Long-time unemployment Low level of work force mobility in Moldavian part of CDR Schools abandon and reduce frequency of pupils due to financial reasons
TTI	Development of a ferry conection between Ukraine and Romania, Bulgaria and Turkey Construction of a new airport in the area Galati-Braila Railways of national and regional importance In Moldavian region Using renewable and alternative energy sources	Lack of Motorways and Expressways Technologically obsolete railway infrastructure in some parts of CDR Insufficient financial sources to develop the local and regional road infrastructure Low connectivity to water and sewage systems
E	Favorable location of the region (at the intersection of important commercial routes) Presence of universities Accessing European funds to support SMEs, the agriculture and tourism	The long economic crises affecting the living standards (GDP/ inhabitant) Decreasing of the number of employed persons Low investments and the postpone of new technologies achievement

The CDR No.18 Braila – Galati – Tulcea – Cahul – Reni lies on the territory of three countries (Romania, Moldavia and Ukraine). It consists of five NUTS3 regions (Galati, Braila and Tulcea counties, Cahul and Reni rayons). Total area is 23 534 km².

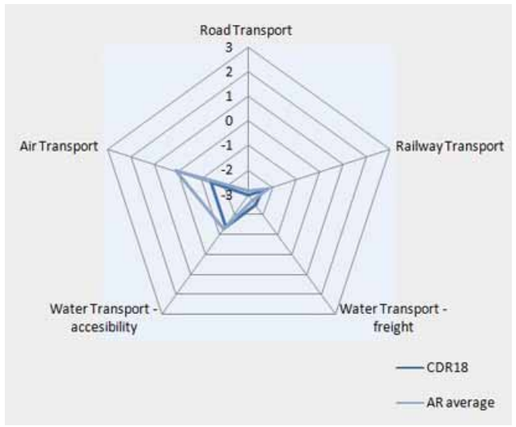
Graph 85



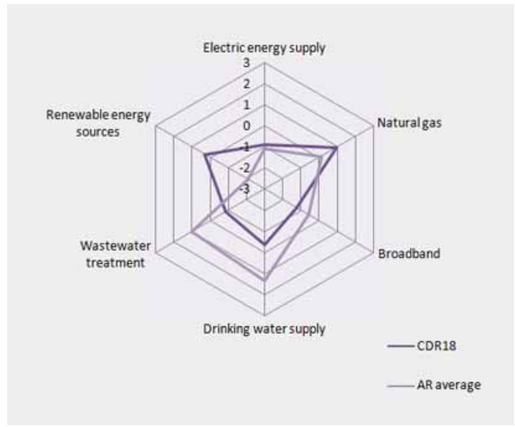
Graph 86



Graph 87



Graph 88



CDR Strategy

General Scheme: Natural Conditions

Global objective: Protect and preserve environment

SO 1: Improve water quality

P 1.1: Water management

M: Construction, rehabilitation and extension of water supply, sewerage and wastewater treatment systems; monitoring the quality water and the pollutants; modernization of agricultural holdings; control accidental oil pollution from ships and port activities; reduce floods in the Prut and the Danube meadow.

SO 2: Waste reduction

P 2.1: Waste management

M: Recycling and recovery of waste, including for energy; implementation of waste management regulations in accordance with national and European strategies; extension of waste management infrastructure; extension of sanitation services in urban and rural areas.

SO 3: Atmosphere protection

P3.1: Reducing air pollution

M: Extension/upgrade of water/wastewater systems; improving basic services for rural population; establishment of wind parks; using bio-fuels in traffic, fleet renewal, promoting public and alternative transport; increasing the green areas around urban localities; increasing the energetic efficiency.

SO 4: Protection of soil

P 4.1: Land resources

M: Afforestation on arid and deserted land, equipment with forest belts; measures leading to reduction of land fragmentation; normally use of chemicals for agricultural purposes; creation and rehabilitation of irrigation systems.

SO 5: Conserving the biodiversity

P 5.1: Management of protected areas

M: Preparation of management plans for protected areas; increased number of specialists on environment issues; reducing the poaching; increasing the area occupied by forests; Promoting ecological agriculture.

P 5.2: Protecting biodiversity in urban areas

M: Rehabilitation/modernization of urban streets and sidewalks; creation/rehabilitation of green areas; planting protection belts; expansion of green areas from localities and rehabilitation of constructions.

SO 6: Education and community actions

P 6.1: Collection of environmental information; a better public access to environment information; organizing actions in the field of environment protection (training, education, reconversion).

Graph 85: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Improved quality of life

SO 7: Residential Construction

P 7.1: Living Standards

M: Housing development, Housing modernization.

SO 8: Eliminating social disparities

P 8.1: Social infrastructure

M: Development of a preventive social assistance strategy; prevention of abandonment; integrating the Roma families in communities; establishing special services for disadvantaged persons.

Graph 86: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Improved, accessible transport and technical infrastructure

SO 9: Balanced development of transport

P 9.1: Developing/upgrading the Road Network

M: Construction of a highway Calarasi-Braila-Galati towards Bulgaria/Moldova; completion of works at Au highway Bucharest-Constanta; construction of express roads; rehabilitation of local roads etc.

P 9.2: Developing and upgrading the rail network

M: Modernization of lines and railway stations; developing/optimizing the railroad infrastructure and installations in cross-border areas; construction of a new railway Macin-Isaccea-Tulcea; etc.

P 9.3: Developing and modernizing the air transport

M: Measures for economic efficiency of Cahul and Tulcea airports; pre-feasibility study to build a new airport in Vadeni commune (Galati county) etc.

P 9.4: Modernization of water transport

M: Modernization of Giurgiulesti port; expanding/upgrading multimodal platforms in ports Galati, Braila, Tulcea and Sulina; navigation facilities for small ports; construction of a new cross-border point at Isaccea etc.

Graph 87: T indicators status in 2020

SO 10: Electrification, heating and renewable resources

P 10.1: Electric energy networks and installations

M: Expanding/upgrading of power transmission/supply network; development of wind energy production; using solar energy; developing power transmission infrastructure in cross border areas; etc.

P 10.2: Development/expansion of heating networks

M: upgrading/expansion/modernization of district heating systems; diversification of heating systems; using alternative sources of energy for heating; investment projects etc.

SO 11: Development of telecommunications and postal services

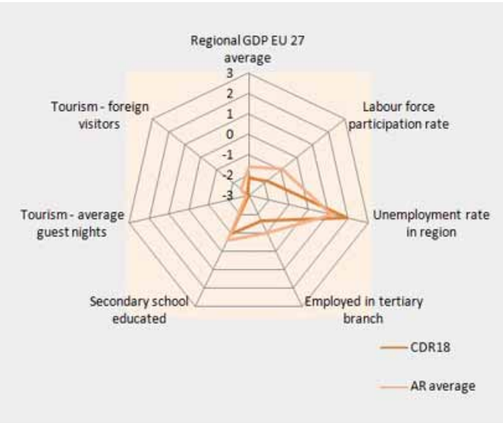
P 11.1: Telecommunication network

M: development/expansion of telecommunication infrastructure in disadvantageous areas; improve the quality of services, low prices; providing high speed INTERNET; etc.

SO 12: Development of gas and water supply

P 12.1: Gas and oil supply and distribution

Graph 89



M: rehabilitation of the national gas transport system, of the transit gas pipeline DN1000 mm Isaccea-Negru Voda; more dwellings connected to national system of gas supply; increasing capacity of gas storage etc.

P 12.2: Water management

M: Modernization/expansion of groundwater monitoring network; execution of eater works; reinstatement of irrigation systems; preserving valuable ecosystem etc.

Graph 88: TI indicators status in 2020

General Scheme: Economy

Global objective: A developed and diversified economy

SO 13: Increasing the economic competitiveness

P 13.1: Full exploitation of economic potential

M: development of transport infrastructure; diversification of rural economy; development of tourism, pisciculture, light industry; networking between research institutes etc.

P 13.2: Tourism

M: New qualification of personnel in the tourism sector; developing cross-border tourism; construction of a new bridge on the Danube in Braila-Galati agglomeration area; exploiting existent lakes for recreational activities and fishing developing rural, cultural, business tourism etc.

SO 14: Business development

P 14.1: More investments

M: Supporting SMEs; attracting local and foreign investments; promoting entrepreneurship; exploiting unconventional energy potential; construction of a technologic park and an airport in Galati; etc

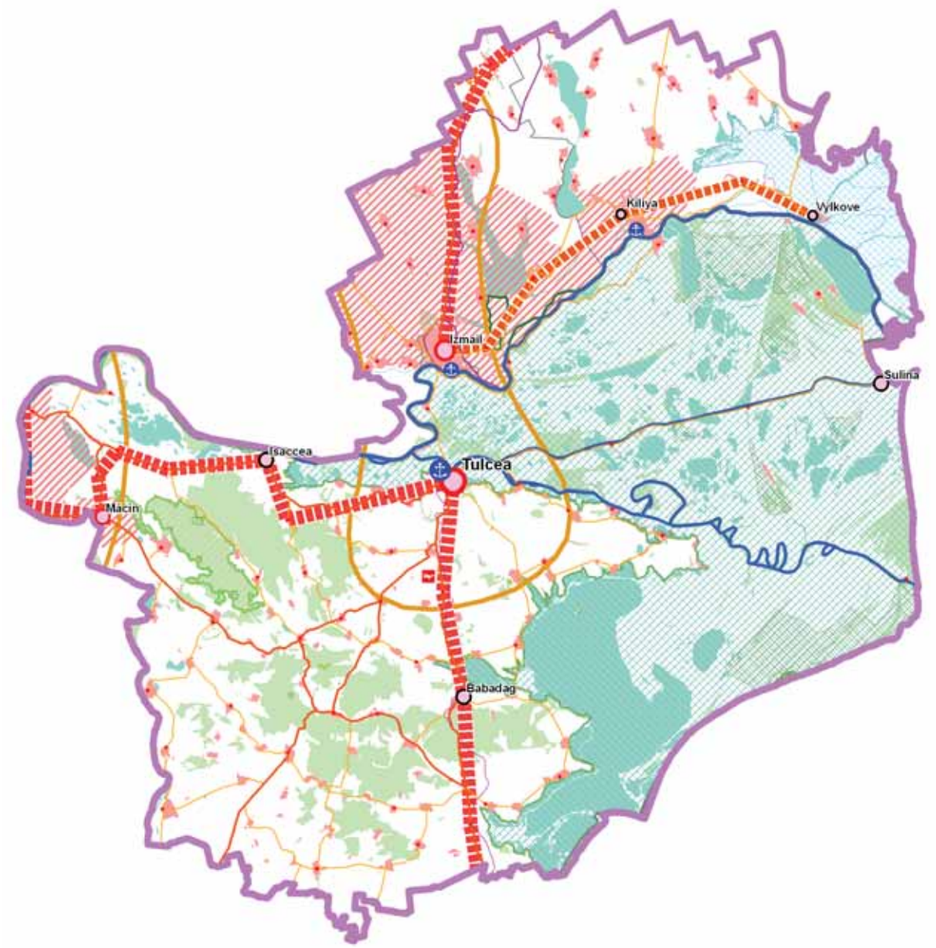
P 14.2: A flexible labor market

M: Professional training; reducing migration of qualified workforce; promoting social inclusion; stimulate the workforce mobility; implementing programs for rural development etc.

P 14.3: Cross-border economic cooperation

M: Supporting business implementing international standards; developing international trade and cross-border cooperation etc.

Graph 89: E indicators status in 2020

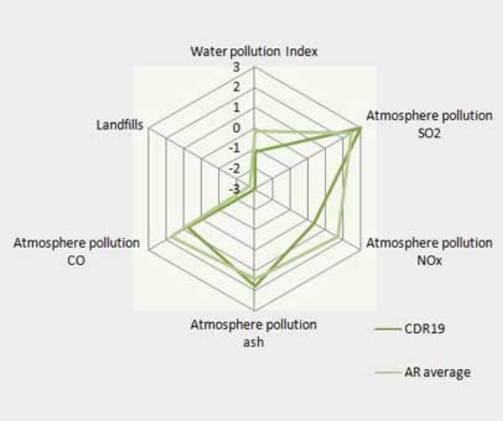


SWOT analysis

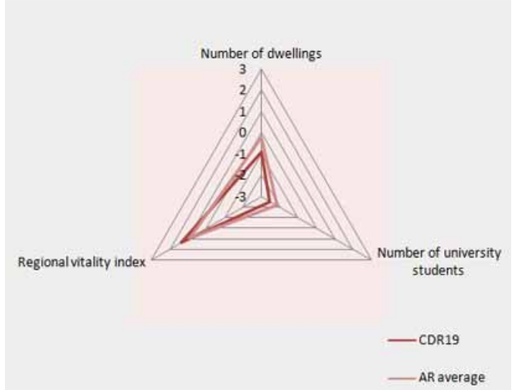
GS	Strengths	Weaknesses
NC	Availability of oil and gas deposits on the Zmiinyi Island shelf Touristic and cultural attractions Investments in environment protection	Low covering with sanitation services in rural areas High nutrient contamination of surface and underground water I Ukrainean part Biodiversity is endangered by uncontrolled tourism
SSHR	Tulcea municipality – pole with balance role in settlement structure, entrance into the D.D.B.R. A concentration of nationalities, high level of tolerance Qualified personnel, local skills	Low population density in Tulcea and Kilyia districts Negative natural increasing, high mortality rate Deterioration of health and social infrastructures Low qualification of working force in tourism field Seasonal dependance of the labor force
TTI	The territory is crossed by important transport corridors The ports Tulcea and Izmail, port facilities Conventional and non-conventional energy sources Border crossing points between Moldova and Ukraine	Low transport accessibility Lack of a highway Un-modernized ferry crossing points on the Danube, obsolete infrastructures in ports and airports Lack of road/railroad bridge in Braila – Galati – Tulcea area No local electricity generation capacities in Izmail district
E	Energetic and non-energetic natural resources Very high touristic, fishery and agricultural potential Numerous possibilities of the Danube's touristic exploitation	Strong GDP decrease, high unemployment rate Poor development of agricultural market Low exploitation of the Danube's touristic potential, low standard of touristic services Very few foreign and national investments
GS	Opportunities	Threats
NC	Development of organic farming Development of aquaculture Extension of protected areas Unexploited natural areas Accessing EU funds	Lack of financial sources Anthropogenic accidents at ports Extension of naval traffic in te Danube Delta Poaching and excessive fishing Uncontrolled tourism
SSHR	Accessing EU funds in human resources direction Relatively cheap workforce Development of marine economy, fishing, wineries, rice and vegetable production Cross-border cooperation	Depopulation and ageing Long-time unemployment Migration of educated labor force towards developed areas School abandon Decline of professional education
TTI	Construction of a bridge on the Danube (linking Braila and Galati counties with Tulcea county Construction of new touristic mini-ports Perspective for creation of the marine port in Kilyia district Developing ferry connections across the Danube	Transport isolation of Kilyia district Unstable operation of the deep navigating canal Danube-Black Sea via Bystre Canal Insufficient financial sources to develop road infrastructure Low conectivity to water and sewage systems
E	The location of the region Development of ship construction The natural offer for agricultural development Unique opportunities for tourism development	Lack of professional training for farmers Migration of qualified workforce Increasing the unemployment rate The concurrence of other similar tourist areas

The CDR No.19 Tulcea – Izmail – Kilyia lies on the territory of two countries (Romania and Ukraine). It consists of three NUTS3 regions (Tulcea county, Izmail and Kilyia rayons). Total area is 11 090 km².

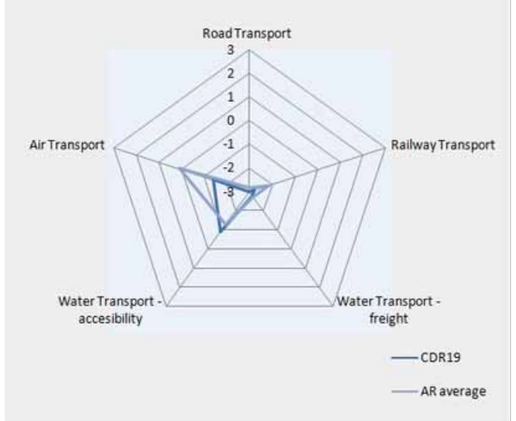
Graph 90



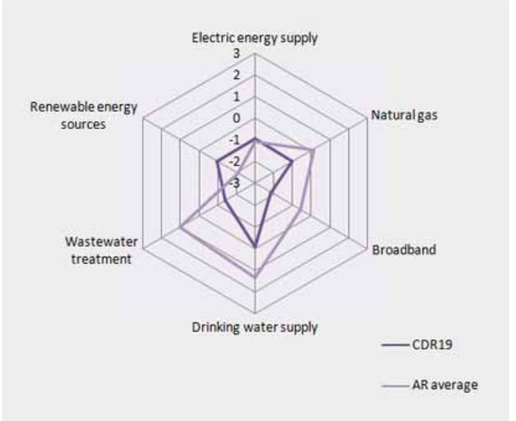
Graph 91



Graph 92



Graph 93



CDR Strategy

General Scheme: Natural Conditions

Global objective: Environment protection

SO 1: Conservation of biodiversity and of natural resources

P 1.1: Efficient administration of protected areas

M: Optimization of the management of the DDBR; facilitating a tri-lateral biosphere reserve; identifying the administrators of all protected areas; reducing the poaching; restoring wetlands; ecological tourism etc.

SO 2: Atmosphere protection

P 2.1: Reducing the air pollution

M: Technologies upgrading; increasing the green areas around urban localities; using the biomass from Danube Delta as alternative energy source etc.

SO 3: Protection of surface and underground water

P3.1: Water management

M: Implementing and monitoring water supply systems in urban and rural areas; rehabilitation and extension of sewage systems; construction of wastewater treatment plants; reducing soil erosion; creating wastewater treatment facilities; implementing integrated river management etc.

SO 4: Reducing the quantity of waste

P 4.1: Waste management according to EU requirements

M: extension of waste management infrastructure; eliminating the non-compliant landfills; extension of sanitation services in urban and rural areas etc.

SO 5: Reduction of natural and man-made risks

P 5.1: Flood protection and flood risk management

M: Hydrotechnical works; sanitary protection zones; flood risk management plans; plans for navigation activities and a system of risk monitoring in the DDBR; etc.

SO 6: Education and community actions

P 6.1: Increasing public awareness on environment issues

M: Collecting environmental information; a better access to environment information; training, education, reconversion.

Graph 90: NC indicators status in 2020

General Scheme: Settlement Structure and Human Resources

Global objective: Creating new opportunities to increase the quality of life

SO 7: Increasing the standard of living

P 7.1: Workforce

M: Training and re-training; development of district strategies; promote labor force mobility etc.

P 7.2: Health

M: Improving the medical care system, especially in rural area; partnerships with NGOs; establishing incentives for medical staff willing to settle in rural areas etc.

P 7.3: Education

M: Modernizing education and education infrastructure; equal access to education; encouraging teachers to settle in rural area; reducing drop-out and illiteracy etc.

P 7.4: Fighting against social exclusion, providing equal opportunities

M: Developing a social assistance strategy; prevention of abandonment; integrating Roma families in communities; new specialized services for elderly and handicapped persons etc.

Graph 91: SSHR indicators status in 2020

General Scheme: Transport and Technical Infrastructure

Global objective: Modern and accessible infrastructure

SO 8: Development and improvement of transport network

P 8.1: Road Network

M: Development and modernization of local roads network; connection to European transport roads; developing cross-border transport infrastructure; reconstruction of national and European roads etc.

P 8.2: Railways

M: Construction of a new railway Macin-Isaccea-Tulcea; modernization of the railway connection Odessa-Izmail, junction station "Izmail"; etc.

P 8.3: Air infrastructure

M: Modernization of the "Danube Delta" Airport; improved accessibility to the airport; attracting low-cost airlines; etc.

P 8.4: Water transport

M: Extension and modernization of multimodal platforms in Tulcea and Sulina ports; navigation facilities for small travel ports; modernization of ports infrastructure; renewal of speed waterway connection Odessa-Izmail etc.

Graph 92: T indicators status in 2020

SO 9: Efficient use of electrical and thermal installations and of renewable resources

P 9.1: Electric energy networks and installations

M: Modernization of local power supply network; creation of a local power plant to provide power supply for the Ukrainean part; using alternative energy sources etc.

P 9.2: Thermal networks and installations

M: implementing new technologies and investment projects; diversifying the heating system; decentralized heating systems; use of solar energy and biomass for heating; etc.

SO 10: Telecommunications and postal services development

P 10.1: Modernization and expansion

M: Improving the quality of networks and services; promoting and extending the access to broadband; supporting SMEs in connecting to broadband etc.

SO 11: Extension and modernization of water supply networks

P 11.1: Water management

M: Installing water treatment plants in Tulcea city and towns of Sulina and Macin; upgrading WWTP; development of centralized drinking water supply system in Kilyia district etc.

SO 12: Development and extension of natural gas network

P 12.1: Gas infrastructure

M: Rehabilitation of the transit gas pipeline Isaccea – Negru Voda; increasing the number of households connected to gas supply networks; upgrading the natural gas system etc.

Graph 93: TI indicators status in 2020

General Scheme: Economy

Global objective: Increasing the regional GDP

SO 13: Increasing the attractiveness of the region

P 13.1: Development of services/tourism

M: Further development of tourism infrastructure on the base of DDBR; creating a local tourism product; building capacities for cruise and yacht tourism etc.

SO 14: Increasing the competitiveness

P 14.1: Development of investments

M: Support for SMEs; promoting and diversifying the touristic offer; modernization of Kilyia shipyard; investments in new technologies; accessing EU funds etc.

P 14.2: A flexible labor market

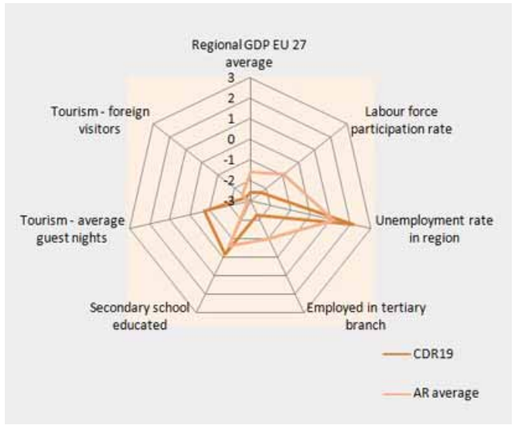
M: Professional training; facilities for firms; reducing emigration of qualified labor force etc.

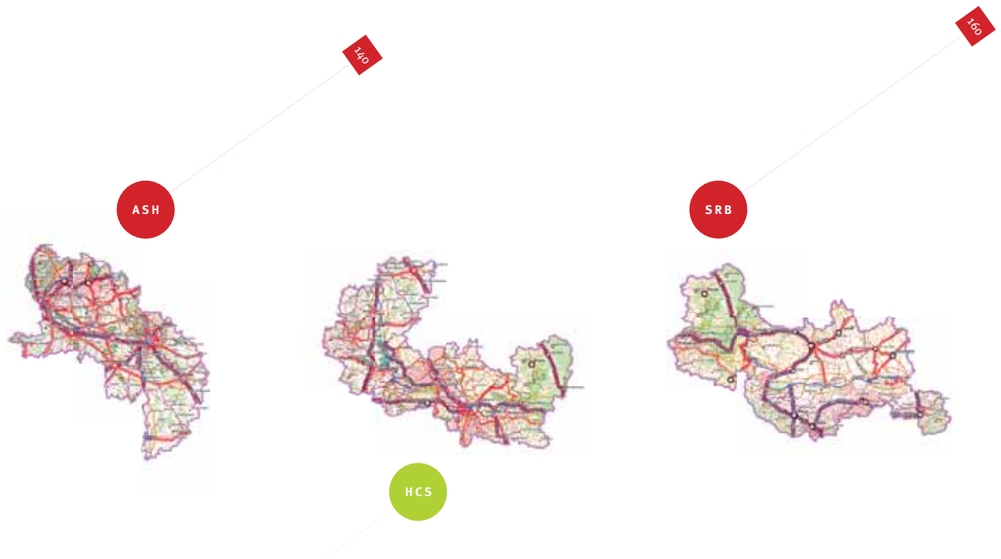
P 14.3: Development of agriculture and fisheries

M: Introduction of irrigation systems; building capacities for the development of organic farming; creating processing centers; modernization of fisheries; development of a sustainable system for reed processing in Kilyia district etc.

Graph 94: E indicators status in 2020

Graph 94





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WP7: Comprehensive strategy

Objective

During the previous project Donauregionen the ARGE DONAU Sub-regions (ADSs) has been identified by experts from partner countries. ADS represents the groups of Danube regions having some specific geographic (natural, settlement, transport, infrastructure and economic) features. The objective of WP7 is to characterize them as concerns their development scenarios.

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Methodology

WP 7 represents the integration of bottom-up approach, where the strategy is derived from the Danube regions strategies and the top-down approach, where the planning issues relevant to the Danube regions development, from various national, trans-national and European planning documents and activities have been mapped.

Bottom up approach was based on the outputs of WP5.

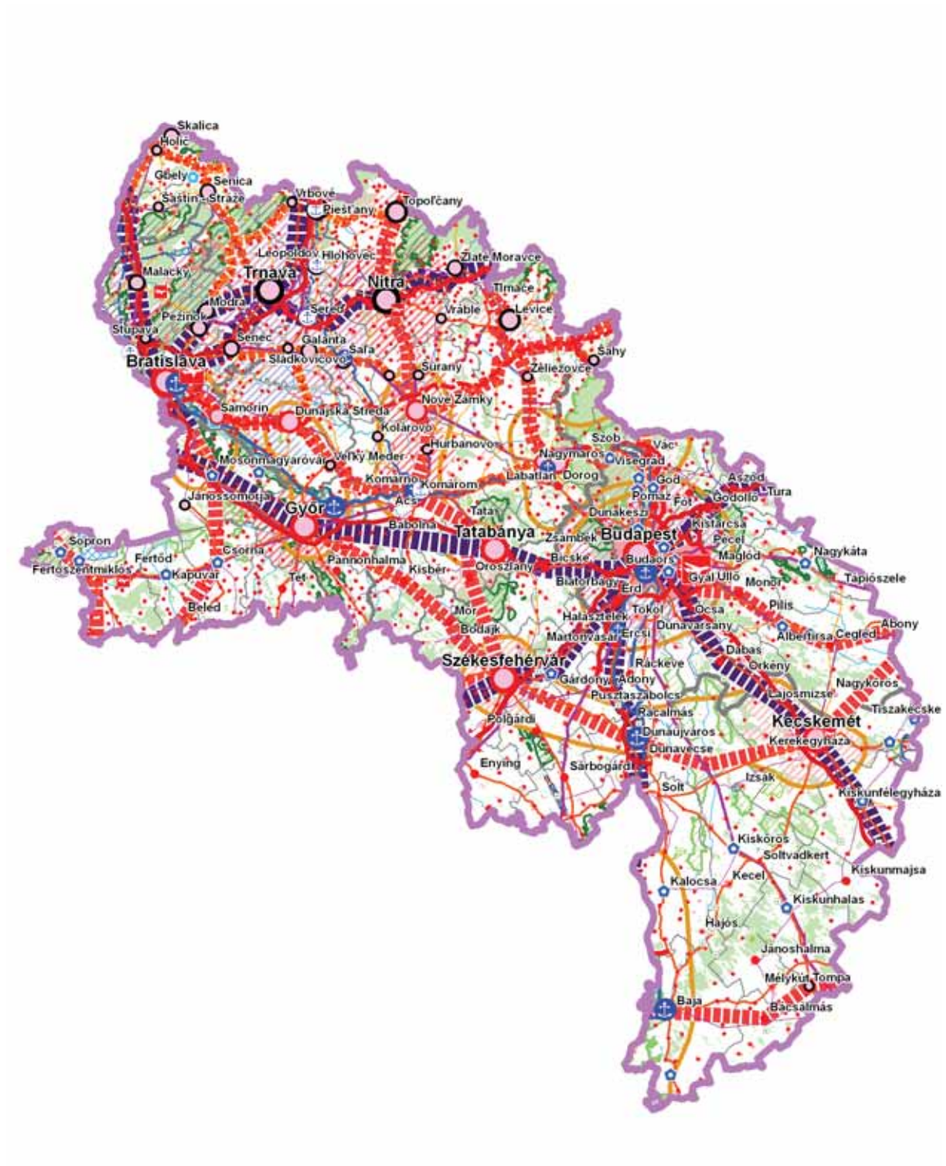
As concerns the top-down approach each country has elaborated for each its ADS special background report, where the relevant planning documents and so called along Danube measures, serving as external factors of the Danube regions development, have been identified.

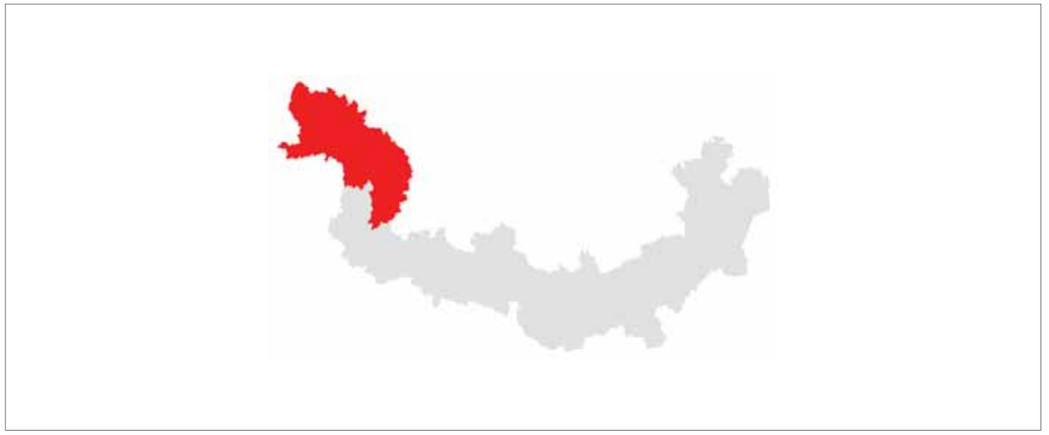
Integration of these two approaches, when the impact of external factors has been added to the results of WP7 is visible on following map and table, where the situation of the Danube regions in 2020 is presented (for detailed information of the table see the description in WP4).

On this base the scenarios of ADSs has been developed.

Outputs

ADSs scenarios. For each ADS the 3 scenarios has been elaborated (optimistic, realistic and pessimistic).





ASH Subregion

Analysis

Natural Conditions

From the viewpoint of the landscape structure there are three different types of landscapes (geomorphologic complexes) in the Slovak ARGE Donau subregion with different landscape potential. There are two plain areas from the west to the east: Vienna basin and Small Danube basin which are divided by the massif of Carpathians (Small Carpathians). The northern border is represented by the flysch Slovakian-moravian Carpathians, mountains Považský Inovec and Tríbeč which take turns with headlands of valley Podunajská nížina along rivers. Border on the northeast is represented by volcanic mountains Pohronský Inovec, Štiavnické vrchy and plain Krupinská planina of the Inner Carpathians. Rivers Morava, Danube and Ipeľ comprise borders on the west, south-west, south and south-east.

The ARGE Donau subregion is very important from the viewpoint of the farmland. There is more than 67% of the whole area farmland. Farmland has a significant position in the Nitra county (468.6 ths. ha) and in Trnava county (291.9 ths. ha). The degree of plowing is very high within the Slovakia (Nitra county – 86.8%; Trnava county – 89.8%).

On the North-West and South-East plain lands role the territory, in the middle of the area Transdanubian Mountain Range (Dunántúli-khg.) and parts of the Northern Hungarian Mountain Range (Északi-khg.) are the determining factors. The first is characterized by agriculture - mainly arable land, the latter is covered with forests, but due to the presence and decades of mining of raw-materials, important features of the region is spoiled landscape and environment polluting industry based on the processing of these materials. In the past few years mining has reached its minimum, quarrying is the only important factor remaining.

Settlement Structure

The conception of the development of the settlement system in the Slovak Republic as a whole draws especially upon two basic premises:

- the necessity to establish interconnections with the European settlement network and
- the creation of optimum conditions for sustainable development of all activities of society.

The conception of interconnections to the European settlement network not only draws upon the acceptance of the present European conceptions of the development of settlement networks, or the conceptions of neighbouring countries, but it alSO draws upon its own unique vision of how to incorporate and use the settlement structure in Slovakia within the Central European and Europe-wide spatial framework in the interest of the competitiveness of the Slovak Republic, its regions and towns, along international dimensions.

From the international point of view the following settlement development factors are dominant for the future creation of a settlement structure in the Slovak Republic:

- geomorphologic and location features, of both wider and internal territories of the Slovak Republic
- settlement-spatial features of the surrounding territories
- possibilities to establish cross-border settlement systems
- the present and projected transit transportation links running through the territory of the Slovak Republic.

The settlement-spatial features of the surrounding territory, which can positively influence the development of settlement structures in Slovakia, especially in the Slovak ARGE Donau subregion area, specifically includes:

- a forming and, in the future, a highly preferred European urbanization axis that basically runs along the Danube river in the direction from Stuttgart – Ulm – Munich – Linz – Vienna – Bratislava – Budapest – Belgrade
- the existence of a high concentration of the population and other activities in agglomerations of European im-

portance, such as the Vienna agglomeration, the Budapest agglomeration

- the north-south settlement belt of municipal regions and agglomeration in Moravia along the western borders of Slovakia (Katowice) – Ostrava – Přerov – Olomouc – Zlín – Brno – Břeclav – (Vienna).

Hungary is a small to medium-sized country on a European scale, which covers 93.036 km², of which a sum of 17.747 km² can be labeled as ASH ARGE Donau Subregion; this is built up of 5 NUTS3 regions (counties): the capital city Budapest, Pest, Fejér, Komárom- Esztergom and Győr-Moson-Sopron. The population of the region was 4.100.100 in 2008.

Almost 30 per cent of the population lives in Central Hungary occupying approximately 7 per cent of the total territory. The settlement network is characterized by many small villages, a few medium-sized country and regional seats, as well as the metropolis of Budapest with an average population per settlement of 3300, but this figure is dropping. Settlements are unevenly distributed. In the hilly Northern and western parts of the country, a dense network of smaller settlements has developed, compared to the much less dense network of large settlements on the Great Plain. Judging by their populations, most towns are small. Nearly 40 per cent have fewer than 10000 inhabitants, and every tenth town has fewer than 5.000 inhabitants although hardly any of these can be considered towns in the functional sense. A further 30 per cent of towns have populations between 10.000 and 20.000, 70 per cent of towns are small. Eight cities now have more than 100.000 inhabitants, in the region: Budapest, Győr and Székesfehérvár. The small-to-medium-sized towns (10.000-50.000 inhabitants) are widely distributed. Although their share of the population is small, there is an especially high number of settlements with fewer than 1.000 inhabitants.

Transport

Development of settlement systems s directly linked to the development of transport infrastructure. In case of cross-border settlement systems, crucial role is being played mostly by superior pan-European, national and supra-regional transport routes and infrastructure.

Transport systems that are integrated within pan-European corridors and TEN-T transport networks, and which run through the Slovak ARGE Donau subregion, are as follows:

- multimodal corridor no. IV. (Česká republika) –Kúty – Bratislava – (Maďarsko) localized for motorways and conventional rail network and combined transport network, Bratislava – Galanta – Štúrovo – (Maďarsko) localized for conventional rail network and combined transport network
- multimodal corridor no. V. axis Va. (Austria) – Bratislava/Jarovce – Žilina – Košice – Záhor/Čierna nad Tisou – (Užhorod – Ľvov) localized for motorways and conventional rail network and combined transport network
- multimodal corridor no. VII. the Danube waterway with public inland harbors in Bratislava, Komárno and Štúrovo
- the main railway node point and basic public terminal of TEN-T combined transport network in Bratislava (multimodal corridors no. IV. and V. – axis Va)
- TEN-T network airport for the international transport in Bratislava (multimodal corridors no. IV. and V. axis Va).

The railway axis Paris-Strasbourg-Stuttgart-Wien with connection to city of Bratislava (within the scope of pan-European multimodal corridor No. V axis Va) is being prepared under the wings of International Transport Forum (hereinafter only ITF) as a priority project of European importance.

The idea of "Hungary as a logistics center" has been around for a long time and is based on solid foundations. These include the favorable geographical location of the country, the international transport corridors passing through it, membership of the EU, the rapid economic development of neighboring countries political and economic stability, the presence of multinational companies and the country's relations with states farther to East. The role of logistics is especially dense in the ASH region as seen on the map. Many elements of this system are missing: a permanent waterway, links to the north, West-East interconnections South of Budapest and the added value beyond simple storage. Bratislava-Szombathely, Budapest-Esztergom, Százhalombatta-Esztergom and Budapest-Sahy are the most important links to be developed.

Economy

In the Region the Regional Gross Domestic Product indicator in purchasing power parity during the monitoring period showed a positive increase from 23% (Fejér megye) to 92% (Trnavský kraj). The positive trend was reported mainly in the Slovak part of Danube region. Economic active population is important potential and value-creating factor of economic development of the area. During the period between 2001 and 2008 the number of economic active population was recorded slightly increase in the monitored region. 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 the Region, most employees worked in the tertiary sector, especially in commerce and market oriented services, wholesale and retail trade. During the monitoring pretiod in the Region it was recorded the significant increase of employment especialy in the sector public administration and defense, real estates busines and financial intermediation. In the building industry, the year 2008 it was recorded slight decrease in comparison with the year 2007 due to the start of contraction crisis beginning within the region as well as on national level.

Documents

Slovak spatial development perspective 2001

Identification of main principles for the spatial development on the national level, with the European content principles as well. The conception of the development of the settlement system in the Slovak Republic as a whole draws especially upon two basic premises:

- the necessity to establish interconnections with the European settlement network and
- the creation of optimum conditions for sustainable development of all activities of society.

The National Regional Development Concept (Hungary)

Aim of document is horizontal management of territoriality and territorial approach in sectoral policies. Its main message is that sectoral developments have to include place-based concepts, and they have to contribute to enforcing national objectives for spatial development.

The National Spatial Plan (Hungary)

The purpose is to outline the future national spatial structure with particular regard to the commitment to balanced, sustainable development of the national territory and to provide an overall framework for the spatial allocation of infrastructure investments and for the control and regulation land use.

European Spatial Development Perspectvie

General objective of the document is achieving the balanced and sustainable development of the territory of the EU:

- economic and social cohesion
- conservation and management of natural resources and the cultural heritage
- more balanced competitiveness of the European territory.

External factors – measures in ASH ARGE Subregion

Key external factors identified in national and transnational documents concerning ASH Subregions are as follows:

- establish cross-border settlement systems
- transit transportation links running through the territory
- preferred European urbanization axis that
- basically runs along the Danube river in the direction from Stuttgart – Ulm – Munich – Linz – Vienna – Bratislava – Budapest – Belgrade
- development of balanced polycentric town system, and to strengthen a new partnerships between urban and rural regions
- securing parity of access to infrastructure and knowledge
- sustainable development, prudent management and protection of nature and cultural heritage
- improve the accessibility as a requirement for polycentric networks
- develop euro corridors
- elimination of juridical barriers which could obstruct spatial planings
- create trans boarder habitat systems
- international coordination of spatial planning

SWOT Analysis

STRENGTHS

- strong potential in landscape morphology
- equally distribution of settlement centers generating development possibilities also for hinterland
- good connection to transeuropean transport corridors
- high level of energy production
- high performance and level of regional economy

WEAKNESSES

- increasing rate of urbanization, and resulting pressure on protected sites
- unfavorable reproduction characteristics of the region
- difficult crossborder connection through Danube
- insufficient RES production
- lower share of production with high added value

OPPORTUNITIES

- modern approaches to energetic utilization of wastes and separation
- utilization of universities and research institutions science-research potential in the region
- possibility for better utilization of air and water (Danube river) transport through connection into international cooperation
- possibilities to utilization of renewable energy sources – biomass, wind power plant
- development of crossborder cooperation with Austria and Hungary

THREATS

- increased demand of nature sources utilization (water, mineral sources.)
- poor development of supraregional and international cooperation
- increasing of concentration of individual transport in major cities
- different interests in energy production

- increase of regional disparities among major agglomerations and rural areas

Scenarios

Optimistic

Agglomeration rate in the subregion will be the highest. Influences from Bratislava will spread over the regional dimension. The agglomeration will be consolidating from Bratislava through Trnava up to Nitra with their relevant hinterlands. Nové Zámky – Komárno agglomeration will be developed just outside of the largest Bratislava agglomeration. Besides, several smaller agglomerations will emerge too – around Levice, Topoľčany and Zlaté Moravce. Other development cities, whose surroundings will be influenced to a much lesser extent, are Skalica, Holíč, Senica, Myjava, Štúrovo and Šahy. The development axes will be created hierarchically along the superior and main regional roads in the system, hence fulfilling the settlement system in sense of Slovak Spatial Development Perspective 2001. In addition to Bratislava agglomeration, the spatial cross-border interactions will be as well seen

This scenarios alSO assumes development of a complete road network to the full planned extent. This means completing the network of highways by extending it (D1 and D2); and construction of highway D4 – closing a full circuit stretching from SR/AT state borders near Jarovce, through Malé Karpaty all the way to SR/AT state borders near Devínska Nová Ves. This scenario also assumes full completion of network of high speed communications (motorways) on the subregion's territory, i.e. R1 from Bratislava to Trnava, Senec, Dunajská Streda and Galanta; section of R3 between Šahy and Zvolen; R7 from Bratislava to Dunajská Lužná, Dunajská Streda, Nové Zámky and Čaka, and finally, section of R8 between Nitra (intersection of R2 and R8) and Topoľčany. For the sake of improving international accessibility, new bridges over the river Danube are assumed to be erected in cities of Komárno and Štúrovo.

Railroad transportation is assumed to see full reconstruction of its networks to meet criteria of required speeds, which includes accompanying constructions on the railway stations along the rails.

For air transportation this scenario assumes construction of new terminal building in Letisko M. R. Štefánika – Airport Bratislava, along with modification and extension of its runway system. Besides, one can expect development of airports in Piešťany and Nitra.

Subregion's economic potential will be gradually moving alSO towards the suburbs of development centers. This will alleviate the strain put on transport infrastructure and migration of workforce. Subregion will witness migration of workforce from other regions of Slovakia, as well as from abroad.

Gross Domestic Product (in PPS) of the region will grow in absolute terms alSO on a year-on-year growth rate basis, and it will be reaching towards the EU average.

There will be a differentiated development of individual counties, where Nitra and Trnava will reach the average EU levels in relatively short time, resulting mostly from localization of new enterprises.

As for regional sector structure of economy, there will be an apparent trend towards diversified economic structure with growing share of sophisticated production and services. Subregional spending on science and research will grow considerably.

Suitable conditions will be formed for further growth of automotive cluster, based on localization of car producers Peugeot-Citroen and Volkswagen.

There will be a growth of business units, especially then small and medium-sized enterprises.

The region will retain its attractiveness for foreign direct investments.

Pessimistic

Besides the growth of Bratislava city and its hinterland, the development will be mostly visible in the regional centers Trnava and Nitra, with polarization in the villages seated in their hinterlands. Other regional cities will grow at a slower pace, mostly those that previously held positions of district centers. Better conditions will be seen by the larger cities such as Nové Zámky, Levice, Komárno, and Topoľčany, respectively. The development axes will increase especially along the constructed superior roads. The cross-border agglomeration tendencies will be seen only by the city of Bratislava.

The scenario supposes complications with obtaining of financial resources and capacities as needed for development of desired transport-related constructions. This scenario expects only highways D1 and D2 to be finished, whereas highway D4 will be a work in progress near state borders. High speed motorways R1, R3 and R8 will not be under construction. High speed motorway R7 is expected to be partially constructed in the closest vicinity of Bratislava, reaching to Šamorín. International accessibility is to be improved only via a new bridge over the river Danube in Komárno.

Railroad transportation is assumed to see only the reconstruction of currently present railway lines.

Air transportation will be limited only to construction of new terminal building in Letisko M. R. Štefánika – Airport Bratislava, along with reconstruction of its existing runway system.

In the field of economy, scenario suppose dynamics of Gross Domestic Product growth, especially in the eastern part of the subregion, will record relatively low growth rates, which will be constantly prolonging the time needed to reach the European average.

Economic development will be characterized by small scale diversification of subregion's economic basis with high sensitivity to changes in market conditions. Primary and secondary sectors will assume major position economic structure of the subregion mostly in Nitra and Trnava counties. Concentration of economic activities will remain mostly apparent in existing centers of development (Bratislava, Trnava and Nitra).

Downturn in the subregion's economic basis will translate into growing unemployment rate above the all-Slovakia average (Nitra and Trnava county) and will initiate migration of the population from eastern parts of the subregion into regional centers (mostly apparent among the younger generation with higher qualification).

This scenario assumes insufficient levels of preparation and execution of planned objectives translated into consequent failure to stimulate new high-quality economic development.

Business environment will witness a gradual decline in the amount of business units, apparent especially in the segment of small and medium-sized enterprises.

Subregion will be less able to attract foreign direct investments, alSO as a result of insufficiently developed transport infrastructure.

Realistic

Is characterized by growing and strengthening of the Bratislava agglomeration, which is alSO apparent cross the state border. There will be a development in Trnava and Nitra agglomeration too. However, Nové Zámky – Komárno agglomeration will witness much less of an expansion. The other regional cities will generate centripetal effects on their immediate hinterlands. The development axes will increase mainly along the main roads, and in areas not far from the central cities.

The scenario operates with an assumption that all transport networks will be constructed in line with proposed planning; however, not all transport-related constructions will be accomplished to the full extent, as originally conceived within the 2030 time horizon. Road network is assumed to see only completion of highways D1 and D2. Highway D4 will be under construction from SR/AT state border near Jarovce to D1 highway. High speed motorways R1 and R7 will be partly developed in the vicinity of Bratislava, in direction of Senec up to Galanta (R1) and in direction of Šamorín up to Dunajská Streda (R7). For international accessibility, a new bridge is to be erected over the river Danube in Komárno.

Railway network is assumed to undergo only a reconstruction of its currently present lines.

Air transportation will be limited to new terminal building in Letisko M. R. Štefánika – Airport Bratislava and reconstruction of its existing runway system; and based on circumstances alSO reconstruction of airport in Piešťany.

Economic potential of subregion will continue to be concentrated in centers, above all in regional capitals Bratislava, Trnava and Nitra, all of which will continue to offer favorable conditions for localization of manufactural and non-manufactural activities. Along with these centers, development will alSO be seen amongst the smaller centers with good accessibility to the higher centers and superior transport networks. However, regional development participants will be acting in insufficiently regulated economic environment.

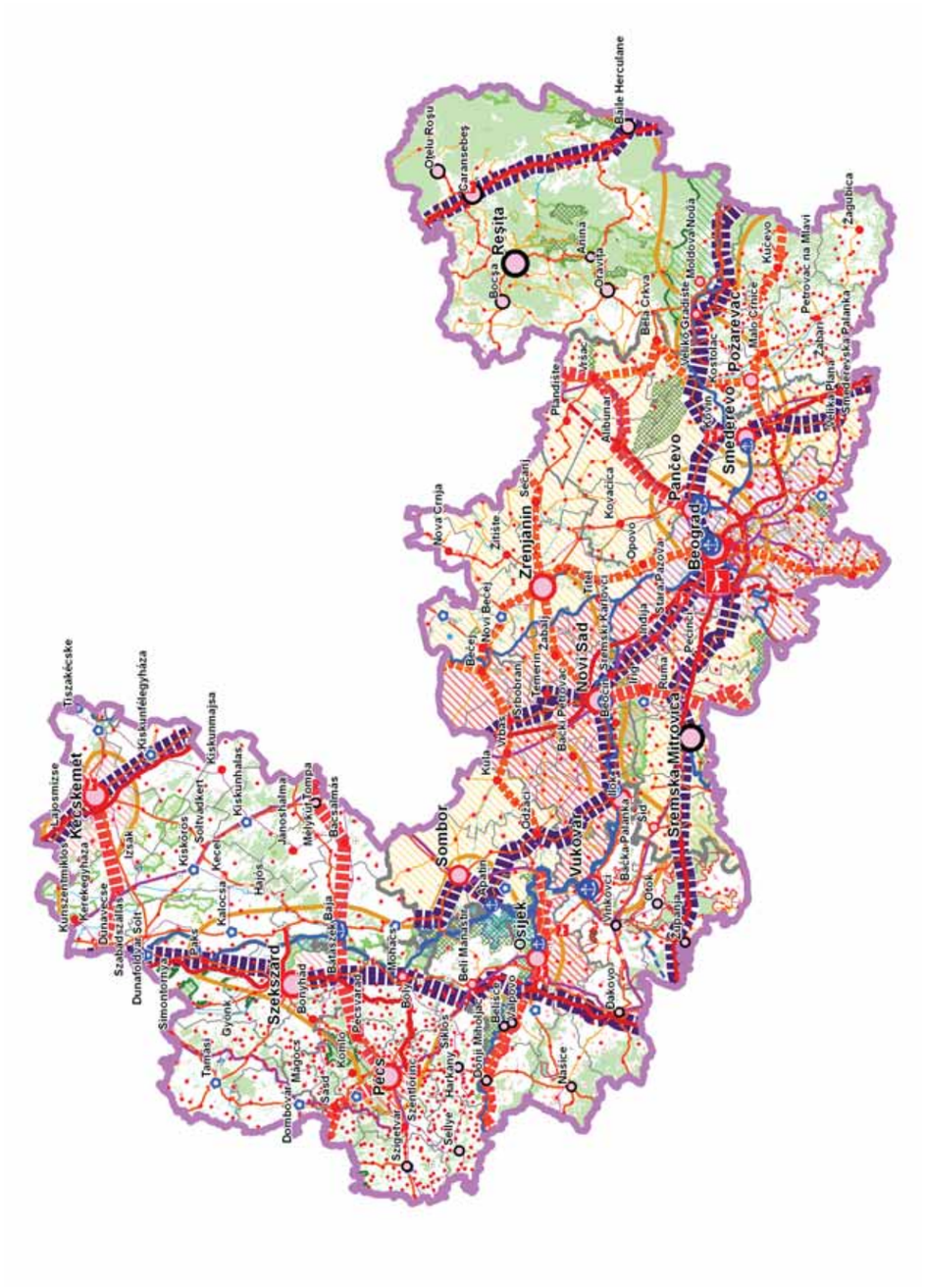
Development of gross domestic product will be stabilized at its current level, whereas its average annual growth rate will fluctuate between 7% (Nitra county) and 10% (Trnava county). The tendency towards equalization and reaching EU levels will lack necessary dynamics.

In eastern part of the subregion (Nitra county and partly alSO Trnava county), there will be a recession in traditional sectors in the regional's economic basis and transition to new structure of economy will lack sufficient dynamics.

Unemployment rate will exhibit impacts of cyclic and differentiated economic development of the subregion. The unemployment rate will be the lowest in the western part of the subregion (Bratislava county), whereas the unemployment rate in the two remaining counties will fluctuate below the all-Slovakia average.

As for the business environment, business units will be emerging and disappearing; especially then in the segment of small and medium-sized enterprises (moderate growth of business units and enterprises).

Inflow of the foreign direct investments into the subregion will stagnate.



HCS Subregion

Analysis

Natural Conditions

In Hungary the follwing counties are included in the Subregion: Baranya county, Tolna county and Bács-Kiskun conuty while in Croatia Osječko-baranjska županija and Vukovar–Srijem County are involved and in Serbia it is Zapadnobačka oblast.

The major special, problematic territory, Homokhátság ("Sand ridge") environmentally Sensitive Area (ESA), lies in Central Hungary between the river Danube and Tisza and covers nearly 50,000 hectares from which 12% is strictly protected as part of the Kiskunság National Park and 19% belongs to Natura 2000 areas. In a geographical sense the Homokhátság ESA belongs to the Kiskunság big landscape lying on the Danube-Tisza Interfluve (1,4 million hectares), while from a socio-geographic perspective it is part of the larger unit of Homokhátság which points to the uplands between the two rivers and comprises 104 settlements.

The ecological significance of this landscape lies in its unique flora and fauna evolving through the continuous interaction between nature and humans. The Homokhátság is a particular combination of sand dunes shaped by the predominant north-western and southeastern winds, saline lowlands and lakes, and fragile wetland areas remaining after harsh river control. The whole process of succession on sandy soil can be followed-up here from the open grassland vegetation to the poplar-juniper forests comprising endemic plant species and an ample insect population. Wetland areas have an extremely rich birdlife based on nesting songbirds and waterfowls beside the rare fish species and mammals living in the reed and willow marshes.

Water quality and especially quantity is one of the key issues people concerning the future of the Homokhátság. Scientific experts as well as local farmers and protectionist agree that aridification will continue and the weather will become more erratic in the next couple of years, which makes both ecosystems and agricultural production face serious challenges, since the most important driver of these processes (global climate change) is highly uncontrollable.

Osječko-baranjska županija is unit of local self-government established in 1993. It is located in the north-east part of Republic of Croatia in Pannonian basin, with the area that makes 7,3% of total area of Croatia. It encompasses the entire lower flow of the Drava river to its estuary into the Danube. The county area extends to Donji Miholjac and Našice in the West, Erdut in the east, Hungarian border in the north and Vukovar-Srijem county in the south. County encompasses several larger geographic units: Baranja in the north-east, Podravina and Našice area in the west and Dakovo region in the south. Those regions are famous for their wine hills and vineyards. The soil of the region is suitable for growing all kind of crops-cereals, fruit and vegetables, as well as for forest and pasture land thanks to Drava and Danube rivers which run through the area together with their tributaries. The periodically inundated Danube River area has created the Kopački rit (Kopački Wetlands), a world-known refuge for numerous bird species, proclaimed a Nature Park and protected as a special zoological reservation.

Vukovar–Srijem County, one of 21 Croatian regional self-governments, is situated at the very north-east of Croatia, between rivers Danube and Sava and comprises historic regions Eastern Slavonia and Western Srijem (Syrmia). Bordering with Serbia in the East and Bosnia and Herzegovina in the South. It covers an area of 2448 km2 or 2.8% of Croatia's total surface area, or 4,3% of land of Croatian territory. The local countryside is mainly flat, its highest peak being Čakula near the city of Ilok (294 meters above sea level), and the lowest peak at Spačva in Posavina (78 m).

The Vukovar-Srijem County has a moderate continental climate, characterized by sunny and hot summers, and cold, snowy winters. The mean annual temperature hovers around 11°C with a mean maximum temperature of

29.9°C, and a mean minimum temperature of 12. 2°C). The wettest periods of the year are spring and mid-summer, which benefits crop production.

Zapadnobačka oblast is situated on the western part of the Panonian plane in Serbia, more precisely it is one among three NUTS 3 regions within geographical and historical region of Bačka. The landscape is stronlgy influenced by the Danube's meanders, the main watercourses beside the Danube are canals within the hydro-system Danube - Tisa - Danube, namely Veliki bački kanal, the canal Bezdan - Prigrevica and the canal Sombor-Odžaci. The main natural asset of this region is the Special Nature Reserve Gornje Podunavlje. The main source of air pollution are sugar factory "Crvenka" and plastic wrapping factory "Hipol" ad. The quality of waters is unsatisfying.

Settlement Structure

Hungary is a small to medium-sized country on a European scale, which covers 93.036 km2, of which a sum of 16.600 km2 can be labeled as ASH ARGE Donau Subregion; this is built up of 5 NUTS3 regions: Tolna, Baranya and Bács-Kiskun. The population of the region was 1.164.969 in 2008.

Almost 30 per cent of the population lives in Central Hungary occupying approximately 7 per cent of the total territory. The settlement network is characterized by many small villages, a few medium-sized country and regional seats, as well as the metropolis of Budapest with an average population per settlement of 3300, but this figure is dropping. Settlements are unevenly distributed. In the hilly Northern and western parts of the country, a dense network of smaller settlements has developed, compared to the much less dense network of large settlements on the Great Plain. Judging by their populations, most towns are small. Nearly 40 per cent have fewer than 10.000 inhabitants, and every tenth town has fewer than 5.000 inhabitants although hardly any of these can be considered towns in the functional sense.

A further 30 per cent of towns have populations between 10 and 20.000: 70 per cent of towns are small. Eight cities now have more than 100.000 inhabitants, in the region: Pécs and Kecskemét. The small-to-medium-sized towns (10-50.000 inhabitants) are widely distributed.

Although their share of the population is small, there are an especially high number of settlements with fewer than 1.000 inhabitants. Nowadays above 300 settlements (10 % of all municipalities) were registered towns, approximately 70 % or 7 million people lived in urban settlements. In European terms, Hungary is moderately urbanized, but HCS region less urbanized when comparing it to other parts of the country. From 1990 status and function more or less coincide. Since then, several settlements have been granted urban status in the spirit of free democracy and independence and some towns now have either no or very poor urban functions.1

1 OECD Territorial reviews Hungary, OECD 2001, France

Osječko-baranjska županija The County encompasses 264 residential areas in 42 local self-government units, whereof 7 have the status of a city and 35 have the status of a municipality. Vukovar-Srijem County is organized into 31 local government unit, of which 5 cities (Vinkovci, Vukovar, Županja Ilok and Otok), and 26 municipalities with 84 associated settlements. Administrative, economic and cultural center of County is Vukovar, while, according to population, the largest city is Vinkovci. Among the municipalities according to population areas of Nijemci, Ivankovo, Babina Greda Tovarnik and Nuštar stand out.

In 2008, Zapadnobačka oblast had 197,974 inhabitants and occupied the fifth rank among nine NUTS 3 regions in the Serbian part of the DONAUREGIONEN+ area in respect to regional population density (81.8 inhabitants/km²). The region has 4 municipalities (NUTS4 / LAU1 units) and 37 settlements (NUTS5 / LAU2 units), mainly being of rural character. According to statistics, five settlements are considered to be urban, namely: Apatin, Kula, Crvenka, Odžaci and Sombor. The biggest centre is Sombor with 48,849 inhabitants.

Transport

Baranya was a relatively isolated region of Hungray in the transportation aspect until the past year. This is due to its location: it is wedged in the corner of East-Croatia, the Mecsek Mountains and the Danube. The only major transportation corridor running through the region was road number 6, but railway accessibility is underdeveloped: compared to its distance, the time accessibly to Budapest is one of the lowest. Pécs becoming European Capital of Culture in 2010 made it necessary to reach a significant headway in accessibility: highway M6/M60 was built connecting the city to Budapest, but connecting infrastructure is still missing: the encircling section of the highway M60, the Bóly-Croatian border section of M6 or a Danube bridge at Mohács.

The road network of Tolna county can be characterized by two features: the routes parallel to the Danube (E73), that is roads 6 (and M6 highway since 2010) and 56 are the main directions of traffic; Szekszárd is the focus point of the region's network (roads number 65 to North-West, 6 from North to South-West, 56 to South, M9 to East, 63 to North-North-West). The base of the road network of Bács-Kiskun county is a network of two North-South – roads 51 and 5 (M5 highway) and minor, mainly West-East roads connecting the former two. These are 52, 53, 55. M5 was one of the first highways built in Hungary and first connected Budapest and the city of Kecskemét. The highway later on has been further developed and now runs to the Serbian border. The enstregthment of the first-class roads has recently been done. The lack of road network on the Serbian border hinders the development of the region.

The existing and proposed motorways of HCS Subregion

In Croatia Osijek lies alongside the European traffic corridor Vc, which connects European North (the Baltic) and South (the Adriatic). The plans for this Transeuropean Budapest - Osijek - Sarajevo - Ploče highway construction within the Transeuropean Motorway Project (TEM) are under way. Different regions in the county are well connected with 1,698 km of roads and 269 km of railroads. Danube and Drava connect the county with the European inland waterway network. With two airports (Osijek and Klisa) in the vicinity, the county became a part of Croatian airports network as well. For the whole area of Eastern Slavonia and Western Srijem routes of special significance are:

- Trans-European traffic corridor (Corridor X) which is connecting Western Europe with Middle East and the corridor which goes North-South (Corridor V) and connects Western Europe with Southern Adriatic Coast - State and international traffic corridors which connect centres and areas in Croatia and complement, or are part of, the European traffic network, such as: 1)Podravina Corridor 2) Route which connects Northern, i.e., Eastern Croatia with South through Bosnia and Herzegovina. Due to its favorable geographical position, Vukovar-Srijem County (VSC) is easily accessible by all modes of transport (road, rail, water, air transport). This positioning is the base of VSC's development and it ensures County's status as a transport and logistics centre. Until the war, the County was a transport and logistics centre, but due to war casualties and damage, especially in rail infrastructure, this status had been lost. However, County's potential to regain the status is unquestionable. Through the County a few European transport corridors pass: Corridor VII (Danube) and the Corridor X (Salzburg-Thessaloniki, passing through Croatia, section Zagreb-Bajakovo). While the road corridor X is in a very good condition, the rail corridor needs renewal. Renovation is currently underway, however, significant investment are still required, before rail corridor's quality gets on a level of European standards. The quality of VSC's road network is generally in a bad condition, which is mainly consequence of the war destructions and inadequate maintenance during occupation. Since the reintegration until today, the roads have been continuously repaired, and according to the data from County's Roads Directorate from February 2006, 700km of roads had been built in the County.

In Zapadnobačka oblast, there are no motorways but there exist three 1st class roads as well as one railroad of international importance (E 85). In respect to waterborne transport, there are two inland waterways and three ports. Danube corridor is the sole multimodal corridor in the region, multimodal infrastructure not being developed. Electric network is well developed. A distribution gas pipeline coming from Novi Sad and going to Sombor and Apatin provides gas to customers. The share of flood risk areas in the total surface of Zapadnobački County is 40.07%. Whereas the access to public drinking water network is high, access to sewage network remains very low.

Economy

Owing to its geographical location Baranya and Bács-Kiskun Counties are a southern gateway to Hungary, and as such it play an important role in foreign relations since towards the Adriatic, through Croatia and to the Balkan through Serbia, they have the opportunity to take part in the cooperation of the southern and south western countries. In spite of the variegated natural features of the subregion, its pleasant climate and tourism features, it can be listed among the medium developed regions both by international and national comparison with high internal regional disparities.

The industrial axe running parallel to Danube and the core areas situated among this line such as Paks, Szekszárd, Pécs or Kecskemét have experienced growth in economic production and income, and this process seems to continue (even giga-investments in the future, e.g. Mercedes-Benz factory of Kecskemét, proposed expansion of Paks nuclear power station).

However, the entire industry, and within that the processing industry – in spite of it being the second most significant sector in the region – plays a significantly smaller role in the performance of the region than is the national average. On the other hand, within the service sector the performance of South-Transdanubia in the fields of administration, defense, education, health and social care, accommodation services and catering was more significant than was characteristic nationally.

In Croatia the County territory is predominantly plain and favors the agricultural development. The productional capacities in the primary agricultural part classify Osijek-Baranja County among the qualitiest part of the Croatian breadbasket. Out of the overall area, 58% is comprised by the arable area and the forests comprise 20%. The arable lands in the County territory enable an intensive agricultural production, as well as an ecologically-based one. Out of a total of 23 industrial productional activities within the County, the processing industry is the most represented one, especially foodstuff and beverage production and the production of cellulose, paper, and cardboard, followed by the chemicals. In the foodstuff and beverage production, important are the capacities in the miller and baker's trade, sugar refinery, fodder processing, dairy industry, abattoir industry and meat-processing capacities, fruit and vegetable processing, confection industry and vintner and brewer's trade. The wood-processing and paper industries are traditionally export-oriented, representing a labor-intensive production that occupies a significant position in the County economy. The textile industry has a long tradition extended to even nowadays, when it is a top-positioned one in spite of difficulties. In addition to the adduced facts, one should emphasize the chemical industry, construction material industry, and the metal-processing industry. With regard to the value of works, number of employees, and productivity, visible is a growth in an overall construction activity an increase in the investments for the communal and energetic infrastructure. The area of the Vukovar-Srijem County was before Homeland war economically well developed with a very productive agriculture and a strong manufacturing industries, while 13 years after the peaceful reintegration of the rear ladder of development and competitiveness of Croatian. Huge direct war damage in the county, estimated at 4.1 billion EUR and a very large indirect effects of war will be felt in the coming decade, especially as global

and transitional processes SO uncompetitive most of the old industrial base. The Republic of Croatia in the period 1998 - 2006. invested in renovation of houses, dwellings and infrastructure, more than 0.6 billion EUR, but it is necessary to encourage private and foreign investment that will create a dynamic economic growth necessary for reaching the Croatian average.

Regional Gross Domestic Product showed a positive increase by 6.9% in the period 2008-2001 in Zapadnobačka oblast. Economically active population is an important potential and value-creating factor of economic development of a region, however in the period 2001-2008 the absolute value of economically active population recorded a decrease (66.7 thousand economically active persons in 2008, which represented a decrease by -2.2% in comparison to 2001). A positive factor for further economic development of the region is an increasing number of employed that has a positive effect on significant decline of unemployment rate in Zapadnobačka oblast. The employment rate of population aged 15-64 dropped from 35.5% (2001) to 33.5% (2008), the unemployment rate indicator reporting a decrease from 33.7% (2001) to 32.4% (2008). In 2008, employees worked mainly in the tertiary sector (49.9%), especially in wholesale and retail trade, transportation and storage and real estates business. A significant share of employed work in the sector of industry (32.9%), too. A significant increase of employment in health and social work, education and public administration was observed in the period 2001-2008. Average gross nominal monthly salary in Zapadnobačka oblast was 528.95 EUR in 2008, the increase of wages in the period 2005-2008 being 21.0%.

Documents

In Hungary the following documents cover this area

The National Regional Development Concept (Hungary)

The National Regional Development Concept (Országos Területfejlesztési Koncepció, NRDC) was first issued in 1998 and was amended in 2005. This version is currently in operation by the 97/2005. (XII.25.) Parliamentary Assembly Resolution (97/2005. XII. 25. OGY határozat), and it sets the mid- and long term objectives of the Hungarian spatial and regional development policy. The objectives serve to implement territorial harmony in Hungary.

The NRDC – in accordance with the National Development Policy Concept (Országos Fejlesztéspolitikai Koncepció, NDPC) of 2005 – calls for the horizontal management of territoriality and territorial approach in sectoral policies. Its main message is that sectoral developments have to include place-based concepts, and they have to contribute to enforcing national objectives for spatial development. This political direction for spatial development was drawn up in the NSDP in accordance with the interpretation of territorial cohesion published by the European Commission. Aim of document is horizontal management of territoriality and territorial approach in sectoral policies. Its main message is that sectoral developments have to include place-based concepts, and they have to contribute to enforcing national objectives for spatial development.

The National Spatial Plan (Hungary)

The National Spatial Plan (Országos Területrendezési Terv, OTrT) was elaborated in 1999- 2002 as a follow up of Act XXI of 1996. The purpose was to outline the future national spatial structure with particular regard to the commitment to balanced, sustainable development of the national territory and to provide an overall framework for the spatial allocation of infrastructure investments and for the control and regulation land use. An important aspect of the elaboration process was the consistent interagency co-operation both at the governmental level and at the level of spatial planners and specialists responsible for transport, water management, nature conservation, environmental protection, agriculture and forestry. Furthermore, the county and local authorities as well as the non-governmental environmental and professional organizations were consulted and were given opportunity to influence decision making. The National Spatial Plan was adopted by the Parliament in 2003 in form of a Law (2003. XXVI. Law, amended in 2008). In Hungary this has been the first national spatial plan to be enacted by the Parliament. It provides a regulative framework for the elaboration of the physical plans of regions and administrative counties. 2

These physical plans are in M=1:500 000. The most important National Structure Plan shows all major technical and transportation infrastructure lines and provides basic information on land-use. Besides the general structure plan, appendices show information on ecological networks, arable land, forest areas, areas of landscape protection, areas in need of complex land rehabilitation, locations of cultural heritage, surface water protection areas, raw materials etc.

These documents produce information on the proposed development of elements of the structure of Hungary for year 2030. Spectacular and remarkable development plans are those of motorways. The proposed new line in the region: M9 Szeged-Kaposvár (-Szombathely) and completion of route M6 Budapest-Osijek cross-border section. The purpose is to outline the future national spatial structure with particular regard to the commitment to balanced, sustainable development of the national territory and to provide an overall framework for the spatial allocation of infrastructure investments and for the control and regulation land use.

European Spatial Development Perspectvie

General objective of the document is achieving the balanced and sustainable development of the territory of the EU:

- economic and social cohesion
- conservation and management of natural resources and the cultural heritage
- more balanced competitiveness of the European territory.

2 Göncz A., Vajdovichné dr. Visy E. (2006): Az Országos Területrendezési Terv. Falu Város Régió 2006/1

External factors – measures in HCS ARGE Subregion

Key external factors identified in national and transnational documents concerning HCS Subregions are as follows:

- establish cross-border settlement systems
- transnational co-operations is to align development co operations and their financing
- to develop a connected transport system
- development of balanced polycentric town system, and to strengthen a new partnerships between urban and rural regions
- saving of co operation possibilities and the further developing of common transnational administration, finance, and management structures for programs and projects
- to involve regional and local actors
- the elimination of juridical barriers which could obstruct spatial planning
- preparation of intensive projects and the check on spatial compatibility
- promotion and support of non EU member states
- sustainable development, prudent management and protection of nature and cultural heritage
- to develop common spatial planning concepts
- tourism as a development factor
- cross border and interregional cooperation
- to create special laws which allows to influence the spatial planning of a neighborhood country
- create trans boarder habitat systems
- international coordination of spatial planning

SWOT Analysis

STRENGTHS

- Preserved bio and landscape diversity and natural resources
- Trans-European transport corridor
- Railway and road corridors
- Well developed electric network
- Strong and developed gravity center (Pécs, Osijek and Sombor)

WEAKNESSES

- NATURA 2000 is not established yet in Serbia and Croatia
- Ageing population and unfavourable age structure
- Underdeveloped multimodal transport infrastructure
- Insufficient RES production
- High unemployment rate

OPPORTUNITIES

- Cross-border cooperation for river and water source protection
- Polycentric settlement development policy
- Danube-Tisa canal (SRB) system utilized for transportation
- E-public services
- Development of gravity centers of the region

THREATS

- Loss and fragmentation of living habitats
- Demographic (aging) and social erosion
- Lack of public investments in transport infrastructure
- Reducing the investments in reconstruction of water-protection infrastructure
- Slow increase in highly educated population

Scenarios for the HCS Subregion until 2020 / 2030

Methodological summary of subregional scenario development

The basic conceptual approach to subregional scenario development is that in this phase of strategy development the scenarios have to promote strategic decision making by concentrating on the possible outcomes of special policies oriented to key factors influencing the subregional development processes.

Therefore, the selection of conditions, processes and intentions as possible activities has to be based on their importance on subregional level. The bottom-up aggregation starts at the county level and it takes alSO into consideration the identified factors on Cross-Danube regional level summarised in WP5 and WP6 packages. This is the initial point for the internal side of the approach. In details it embraces:

WP5 – SWOT-analysis by counties

WP6 – HCS CDR SWOT-analysis + Serbian comments

WP5 – General Scheme Indicators by counties

WP5 – County strategies: Priorities and Measures by GSs

WP6 – HCS CDR strategies: Priorities and Measures

Data were competed for Serbian parts from the Spatial Plan of the Republic of Serbia 2010-2020

Based on the expert evaluation of the individual items of SWOT analyses by counties and cross-Danube regions as well as by General Schemes an aggregated SWOT analysis was prepared for the HCS subregion by General Schemes.

Similarly, the strategic priorities and measures on the basis of their frequency by counties and cross-Danube regions as well as by General Schemes were aggregated into measure types and key priorities for the subregion.

The reason of selecting the subregional measures and priorities in this way is that the most frequent measures and priorities may represent good foundation for a kind of common agreement and from another view these are the measures and priorities which are the most important for co-ordination.

In addition, this synthesizing process may result in a mutually acceptable common general objective and a future image of the region to be realised.

A further analysis of the synergies of common priorities and measures helps to identify the importance of individual priorities and measures as internal activities. For this examination a cross-impact table was set up. There are two opportunities for the estimation of interaction between individual priorities and measures: (1) if there is any direct interaction it is indicated by 1 – this is the simplest way; (2) a more exact estimation reflects the strength of the interaction by weighting it on a scale from +3 (or 5) to -3 (or -5). In this case the experts were asked to estimate the existence of direct impact according to the number (1) opportunity as a first approach to synergies. The result for the scenarios is the identification of the most influential and the most sensible priorities and measures.

The external side for scenario development is based on global, European and national expectations, objectives and tendencies appearing as crucial influencing factors of subregional policies. These are alSO summarised in the frame of WP5 and WP6 of the project, but relevant documents of the United Nations Organisation, European Union and those of the national development of individual countries (Hungary, Croatia, Serbia) have also been additionally considered.

The selection of key scenario generating factors is the result of the evaluation of interactions between external and internal elements from the aspect of the future image of the subregion.

The selection of maximum 4 typical indicator for each internal activity type is based on the availability of information and the sensibility of the indicator to changes in the activity.

The scenarios are generated by expert evaluation of changes – their strength and direction on a scale of 5 levels – in the indicators. The generating forces are the concentration of policies to individual generating factors. Each policy orientation has a pessimistic, a standard and an optimistic variant on the basis of economic development dynamics. The reason of selecting this variable is that the dynamics of economic development is a basic condition for any intervention, and may reflect its potential strength, too.

Finally to promote the comparative analysis of scenarios the impacts are summarised in an impact table with colours. The colours from red through yellow to green indicate the changes from unfavourable through neutral to favourite in a gradual transition.

The methodological steps are summarised in the following order:

WP5 – SWOT-analysis by counties

WP6 – HCS CDR SWOT-analysis + Serbian comments

WP5 – General Scheme Indicators by counties

WP5 – County strategies: Priorities and Measures by GSs

WP6 – HCS CDR strategies: Priorities and Measures

Missing data: Spatial Plan of the Republic of Serbia 2010-2020

Identification of activity types as internal factors by GSs

Activity weighting based on the number of occurrence in the counties

Synergy analysis

Selecting the most important internal influencing activities and processes with indicators

Identification of key factors based on external processes (Analysis and evaluation of EU and national documents in the mirror of the regional SWOT-analysis, and county strategies) as scenario-generating forces:

Selecting the indicator of GDP growth rate reflecting the change of accessible resources and the absorption capacity for each scenario.

Generating strategic scenarios by estimating the impact on indicators
The numbers in the interval [-2 , +2] reflect the strength of changes of individual indicator values

Summary of the SWOT-analysis

The subregion is heterogeneous, therefore particularly the strength and the weaknesses are not necessarily valid to each territorial units of NUTS 3 or lower level. The aim is to identify factors which are relevant or of great importance on subregional level. The contradictory characteristics like the highly educated labour force as a strength and the low level of education as weakness are present in the subregion reflecting the regional differentiation of the labour. The indication of the problem is necessary in this way because they need different strategic approaches either individually or as a unified synthetic problem.

The schemes for institutional scenario variants:

- the pessimistic scenario of the institutional system results in a lack of co-ordination, the possibility of accepting contradictory measures, even the emergence of environmental, economic or social conflicts.
- the standard scenario is the survival of the present system. This means the opportunity to take small steps forward in common issues, and prompt solutions in urgent cases. Crossing the borders will remain strictly controlled due to the Schengen criteria.

- according to the optimistic scenario the Schengen criteria will be loosed gradually, the emergence of mutually accepted and developed cross-border institutions promote the cross-border co-operation in environmental, economic and social issues.

A general tendency may be outlined in relation to each other scenarios that in case of the pessimistic institutional variant their realisation will be more difficult, in case of the standard institutional variant only a slow, gradual improvement may be expected, and in case of the optimal institutional variant some improvement may occur even their pessimistic scenario circumstances.

Strategic scenarios

The scenario-generating factors for various scenarios are identified on the basis of external conditions and internal problems and intentions reflected in the key activities and processes. Considering the time span until 2020 or 2030, and the requirement of concentration to increase the efficiency of interventions the scenarios are based on 3 GDP growth rate variants of the EU combined with concentration – indicated as orientation or oriented – to critical problems of development tasks. The basic scenario variant generating factor is the economic growth based on EU perspective. The reason of this decision is that the available resources are strongly determined by the possible growth rates not only as the available sum of money but as the receiving capacity of the region, too. The pessimistic scenario variants suppose a low GDP growth rate, less than 2%/year, the standard variants suppose around 2%/year, and the optimistic variants above 2%/year.

These are as follows:

- Economy oriented scenario
- GDP growth rate:
- Pessimistic: r ‹ 1,5 %
- Standard:1,5 % ‹ r ‹ 2,5 %
- Optimistic: r › 2,5 %
- Water management oriented scenario
- GDP growth rate:
- Pessimistic: r ‹ 1,5 %
- Standard: 1,5 % ‹ r ‹ 2,5 %
- Optimistic: r › 2,5 %
- Transport oriented scenario
- GDP growth rate:
- Pessimistic: r ‹ 1,5 %
- Standard: 1,5 % ‹ r ‹ 2,5 %
- Optimistic: r › 2,5 %
- Environment oriented scenario
- GDP growth rate:
- Pessimistic: r ‹ 1,5 %
- Standard: 1,5 % ‹ r ‹ 2,5 %
- Optimistic: r › 2,5 %

Economy oriented scenario

The economic development is preferred to approach to the level of the EU average GDP/capita, and to increasing the standard of living in the subregion, as well as to establish additional resources for growth. The economic performance, and the solution of imbalances of economic structure are in the core of this scenario.

1/a Pessimistic variant

The low growth rate of the EU decreases the market opportunities and resources of support, therefore the unemployment rate is decreasing, crisis management is in the focus of the regional economic policy, too. The narrowing resources enforce territorial concentration of investments, and relatively more intensive development of clusters. Due to less financial resources R&D co-operation decreases particularly in case of deficiencies in the institutional system.

For the future the vocational training efficiency is increased. Owing to the concentration of economic activity the population is also concentrating. The mobile labour force moves into urban centres, the vitality index in rural areas is worthening.

The infrastructural development is stagnating, while the pollution (water and solid waste generation, and atmosphere pollution) is increasing owing to technological backwardness. More people is to prefer public transport, while the transport of goods is decreasing.

Tourism is sensible to economic problems, therefore the parameters of tourism performance are decreasing.

1/b Standard variant

There is a slow decrease of unemployment rate. The economic policy concentrates on cluster development in various branches, while a slow increase may be observed in the field of common R&D project development for better utilisation of local resources. Basic condition of more dynamic economic growth is the increased efficiency of vocational training. The tendency of the increasing share of population with higher education is continuing based on regional university centres. Anyway, the outmigration – particularly to urban centres – is continuing parallel with the decreasing level of vitality index.

A moderated infrastructural development takes place to improve housing and environmental conditions. Due to the slowly improving conditions people prefer again the individual transport, and the performance of goods transport is alSO increasing. Following the present tendencies and EU priorities, the share of alternative energy resource utilisation is increasing.

There is a fluctuation in tourism, but there are signs of increasing demand and performance.

1/c Optimistic variant

The more dynamic economic environment creates market opportunities, and the regional economic policy intensi-

vely utilises them. The unemployment rate is decreasing, the clusters are flavouring both in the food production and in traditional and new industries and services. Universities and research institutions have enough resources for common R&D projects stimulated by international and particularly regional corporations.

Based on the attractiveness of regional centres the outmigration is moderated and may be balanced by some immigration. Due to these changes the vitality index may stagnate or even improve.

The infrastructure and transport development is intensive to create favourable conditions for national and foreign investments. The demand for public transport is decreasing unless the environmental consciousness will change the attitude to individual transport. The more intensive economic development is followed by increased environmental pollution. In this context the higher level of the utilisation of alternative energy resources is a favourite tendency which may decrease the pollution effect of the economy oriented development.

Based on the tourist opportunities of the region the improving economic environment contributes to an intensive tourism development. (see Table 24 Economy oriented scenario)

Table 24 Economy oriented scenario

Key factor	Indicator	Economy oriented scenario		
		Pessimistic	Standard	Optimistic
Economy	GDP growth rate	‹1,5 %	1,5-2,5 %	›2,5%
	Unemployment rate inverse	-2	1	2
	Number of clusters	1	2	2
	Common R&D projects	-1	1	2
Population	Vocational training efficiency	1	2	2
	Share of population with higher education	-1	1	2
	Migration balance	-2	-1	0
	Vitality index	-1	-1	1
Water management	Share of dwellings with piped water supply	0	1	2
	Share of dwellings with sewage supply	0	1	2
	Capacity of water reservoirs	0	1	2
	Water pollution index inverse	-1	0	1
Transport	Density of motorways	0	1	2
	Number of multimodal logistic centres	0	1	2
	Volume of transported goods tkm	-1	1	2
	Number of passengers pkm	2	0	-1
Environment	Atmosphere pollution index inverse	-1	0	1
	Landfill capacity	-1	1	2
	Share of alternative energy sources	0	1	2
	Territory of protected areas	-1	0	1
Tourism	Number of TDMs	0	1	2
	Tourist guest nights	-1	1	2
	Share of foreign tourist guest nights	-1	0	2

Water oriented scenario

Water is considered by many authors the most critical natural resource of the 21st century, and the subregion is very abundant in this natural resource. Three of the largest tributaries of the Danube (Drava, Sava, Tisa) flow into the Danube in the territory of this subregion. Water is a blessing and a curse for the region. There are great opportunities due to these rivers, but floods and inland waters are great dangers at the same time. Contrary to this water abundance there is alSO a territory in the subregion mostly endangered by desertification in Europe owing to climate change. Consequently, water management is a critical issue for the subregion, and the solution of the tasks connected to it needs to consider long-term perspectives and huge financial resources.

2/a Pessimistic variant

The unemployment rate is relatively less increasing due to the labour demand of works connected to water management. The population processes are similar to the pessimistic variant of economy oriented scenario owing to the lack of resources. The concentration to common water problems stimulates the co-operation of universities and research institutions to common R&D projects.

The water infrastructure is a large and important segment of infrastructure, therefore, the indicators of infrastructure development may increase. Water pollution index may improve but other environmental conditions may deteriorate because of financial deficiencies of protection. The demand for public transport shows moderated increase because of the selective economic impact of policy orientation.

The financial shortages may result in the concentration to the socially most critical water situations. In this case the supply of territories and settlements characterised by high population density will dominate, consequently the concentration processes are to be strengthened, and large territories with the signs of desertification may become depopulated.

Tourism is sensible both to economic problems, and water supply, therefore the parameters of tourism performance are decreasing. However, water connected tourist attraction facilities of the region may alleviate the decrease of tourism parameters, and may also contribute to economic survival.

Table 25 Water oriented scenario

Key factor	Indicator	Water oriented scenario		
		Pessimistic	Standard	Optimistic
Economy	GDP growth rate	‹2%	1,5-2,5 %	›2,5%
	Unemployment rate inverse	-1	-1	1
	Number of clusters	0	1	2
	Common R&D projects	1	2	2
Population	Vocational training efficiency	1	2	2
	Share of population with higher education	-1	1	1
	Migration balance	-2	-1	0
	Vitality index	-1	-1	0
Water management	Share of dwellings with piped water supply	1	2	2
	Share of dwellings with sewage supply	1	2	2
	Capacity of water reservoirs	1	2	2
	Water pollution index inverse	1	2	2
Transport	Density of motorways	0	0	1
	Number of multimodal logistic centres	0	1	1
	Volume of transported goods tkm	-1	0	1
	Number of passengers pkm	1	0	-1
Environment	Atmosphere pollution index inverse	-1	0	0
	Landfill capacity	-1	0	1
	Share of alternative energy sources	0	1	1
	Territory of protected areas	0	1	2
Tourism	Number of TDMs	0	1	1
	Tourist guest nights	-1	0	1
	Share of foreign tourist guest nights	-1	0	1

2/b Standard variant

The increase of unemployment rate is moderated by water oriented policy based on the special labour demand of works connected to water management. This is why the efficiency of vocational training has to be raised significantly. Considerable sources of cluster development are transferred from other branches to the development of water supply and protection. The results are higher standard of living in water supply and sewage management, better accessibility to irrigation for agricultural production, and particularly increased level of flood protection. The tendency may stimulate the common R&D activities, and to make steps for the development of cross-border water monitoring systems. However, these opportunities are hindered by economic deficiencies and fluctuation.

The impact on tourism is limited because the activities are connected to local population, and the water protection areas are quite closed. Problems/ conflicts may occur owing to the touristic over utilisation of free water surfaces, and existing facilities.

2/c Optimistic variant

Great opportunities to realise large investments and to build up a water oriented economy with water clusters, and complex water monitoring systems in the subregion.

The decrease of unemployment is supported by an efficient vocational training system in co-operation with entrepreneurs and universities.

The water supply and sewage treatment is well developed, the agriculture has excellent opportunities for irrigation, difficulties of water shortages created by climate change are mitigated by increased capacities of water reservoirs. At the same time a new system of flood protection is created and operated. The increased importance of water results more protected areas, and regulated increase of tourism connected to water. (see Table 25 Water oriented scenario)

Transport oriented scenario

The subregion is crossed by the Helsinki corridors Nr. 5, 6 and 7. Significant development took place in the last years, but the missing connections are planned to build after 2013. These Trans-European network development requirements and the necessary improvement of local transport conditions is the reason of the transport oriented scenario elaboration, in addition to the general importance of transport in any development activity.

In certain aspect this type of policy may be considered as continuing the earlier EU regional development policy that was followed e.g. in Italy and Spain. It is expected that by increasing the accessibility the economic and social development will speed up. Anyway, just the experiences of these countries have proved that only the transport development is not enough. The local accessibility improvement has to be supported by local economic and social measures to stimulate changes.

3/a Pessimistic variant

Economic difficulties will slow down the investments into transport facilities. In these circumstances the local policy based on transport development priority may concentrate to preparing for better economic environment, therefore the research and planning activity is preferred. Another direction of preferences (and considering the transport network and facilities of the region this seems to be more probable): the resources will be utilised to preserve the present capacities, and only the most urgent tasks will be resolved.

In these circumstances the present tendencies of concentration are expected to continue. There is a danger of a series of negative feedback impact on the economic and social processes. However, the high transport potential and the existing strengths of the transport system offer opportunities to compensate economic difficulties. Some initiations may be realised to overcome economic difficulties in the field of telecommunication system, and multimodal transport infrastructure development.

As in case of each pessimistic variant the increasing need for public transport capacities is expected. The stock of vehicles in each transport branch becomes older causing safety and environmental risks.

3/b Standard variant

The development for connecting the already existing motorways and the construction of bypass roads, as well as the urban transport development remains in the focus of road transport development. The deficiencies of transport facilities will be gradually completed. The transit demand is increasing. Therefore, the utilisation of the present capacities will be more intensive, even the improvement of transit conditions – particularly the multimodal centres and facilities - is expected. The development of local transport is concentrated to critical points, and to territories of high transport demand. The co-ordination with cluster development is necessary.

Public transport has to be more attractive through new investments to compensate the turn of demand towards individual transport. This is particularly critical in the zones of suburbanisation. The increasing individual transport creates additional need for surplus facilities, like parking places.

The dynamics of telecommunication infrastructure is high. New services emerge.

The increased performance of transport against the limited introduction of environment compatible technologies results in higher atmospheric pollution. Slow decrease of the vehicle age structure is expected. Waste management – particularly along transit routes and connected to transport services – becomes more important.

3/c Optimistic variant

The dynamic economic growth will intensify the internal and transit transport depending on the spatial aspects of the integration processes. The role of EU transit corridors of the subregion will increase with the dynamic integration of the Southern and South-Eastern part of Europe, and the closer connections with Turkey and Near-East countries. The capacity and quality development in all transport connected activities is enforced and supported.

The missing lines and capacities are completed, multimodal transport facilities are developed creating opportunities to connect local clusters and production centres into the international streams of goods. The process is particularly advantageous for the large urban centres, but the conditions of impact distribution using various means of communication are present, therefore the subregional cohesion is strengthening.

The suburbanisation highly stimulates the individual transport development needs resulting critical situations unless an attractive public transport system is developed. The increased traffic needs the development of control and transport safety systems.

The improving rate of unemployment is mainly the consequence of indirect impact of transport development.

The improving accessibility (through better roads, railways and airport capacities) makes the tourist facilities of the subregion more attractive, therefore the tourism indicators will improve.

The intensive growth of transit and local transport will increase air pollution against the significant improvement in the age structure of the stock of vehicles. The increased capacities and performance of transport may endanger the biodiversity through segmentation of natural habitats and the risk of various accidents. (see Table 7 Transport oriented scenario)

Environment oriented scenario

Considering the natural values of the subregion and the sustainability preferences both at the EU and national levels the preservation and management of natural heritages should be of crucial importance. Focusing on the environment does not mean only the preservation of natural environment, but it alSO includes the created environment, their sustainable utilisation and the production of means for utilisation as well as the way of operation of each economic and social actor.

Environmental issues in the subregion have to get particular attention due to its sensibility to climate change, its great natural variety (from mountaneus areas over aquatic habitats to sand surfaces on plains), and rich historical heritages. In addition, the importance of agriculture and the transit role as well as several polluting industries may create environmental conflicts.

In each variant mine clearance is a continuing effort to increase subregional safety.

4/a Pessimistic variant

Economic difficulties usually hinder environmental development efforts. The strong commitment of the EU on sustainability and the long-term view of crisis management offer good chances for environmental industries for the contribution to overcome difficult periods. If this is not recognised the relapse of the economic conditions will result in deterioration of environmental conditions. The degree of changes of unemployment depend on the decision between these alternatives.

Emphasizing environmental issues, and using EU support may stimulate the work on common R&D programs, and increasing vocational training efficiency for creating sound basis of present operation and preparing the future. Considering the share and importance of water bodies in the subregion, focusing on environmental issues may result some improvement in water supply and sewage treatment even in these circumstances.

Table 26 Transport oriented scenario

Key factor	Indicator	Transport oriented scenario		
		Pessimistic	Standard	Optimistic
Economy	GDP growth rate	<2%	1,5-2,5 %	>2,5%
	Unemployment rate inverse	-1	0	1
	Number of clusters	0	2	2
	Common R&D projects	1	2	2
Population	Vocational training efficiency	1	2	2
	Share of population with higher education	0	1	2
	Migration balance	-1	0	1
	Vitality index	-1	0	1
Water management	Share of dwellings with piped water supply	0	1	2
	Share of dwellings with sewage supply	0	1	2
	Capacity of water reservoirs	0	1	1
	Water pollution index inverse	-1	0	1
Transport	Density of motorways	1	2	2
	Number of multimodal logistic centres	1	2	2
	Volume of transported goods tkm	0	2	2
	Number of passengers pkm	2	2	1
Environment	Atmosphere pollution index inverse	-2	-2	-1
	Landfill capacity	-1	0	0
	Share of alternative energy sources	0	1	1
	Territory of protected areas	-1	0	1
Tourism	Number of TDMs	1	1	2
	Tourist guest nights	0	1	2
	Share of foreign tourist guest nights	0	1	2

Cheap, locally compatible solutions for the utilisation of alternative energy sources may contribute to moderate pollution. However, the environmental indicators in total rather decrease or stagnate.

4/b Standard variant

The initiations for common environmental measures and activity co-ordination in protected areas will unfold. This is supported by target oriented common R&D projects and vocational training based on EU, national and subregional support frames.

There is a slight increase of the share of population with higher education due to the strengthening role of subregional universities and the labour demand of the operation and organisation of activities in sustainable way. The better environmental conditions make the subregion more attractive, therefore the demographic indicators may be stabilized.

The environmental preferences of development result better infrastructural conditions in water supply and sewage and waste treatment. Dynamic increase in the utilization of local alternative energy sources is expected based on various external and internal support schemes.

The share of environmental industries will increase; the emergence of environmental industrial clusters takes place. The idea of social responsibility gains ground in the entrepreneurial sphere. The environmental monitoring systems gradually will be built up.

In the agriculture the conditions for biological production will improve. The territory of protected areas will increase.

Urban and rural rehabilitation programs create more habitable environment.

For tourists the attractiveness of the subregion increases.

4/c Optimistic variant

The enforcement of the EU principles of sustainable, smart and inclusive economic growth is particularly advantageous for the optimistic variant of environment oriented scenario. The transformation of economic structure is in the direction of environmental industries and technologies. Against the dynamic economic growth the pollution is not increasing. The environmental conditions are improving. In the agriculture the favourite conditions are utilised by combining the zones of bioproduction and extensive agriculture with areas of intensive, environmentally sounded agriculture of high productivity. The production structure is gradually changing to meet the impact of climate change. The rate of unemployment decreases. Common R&D projects are realised to support this economic structure and cluster development, a well as to monitor environmental situation.

Table 27 Environment oriented scenario

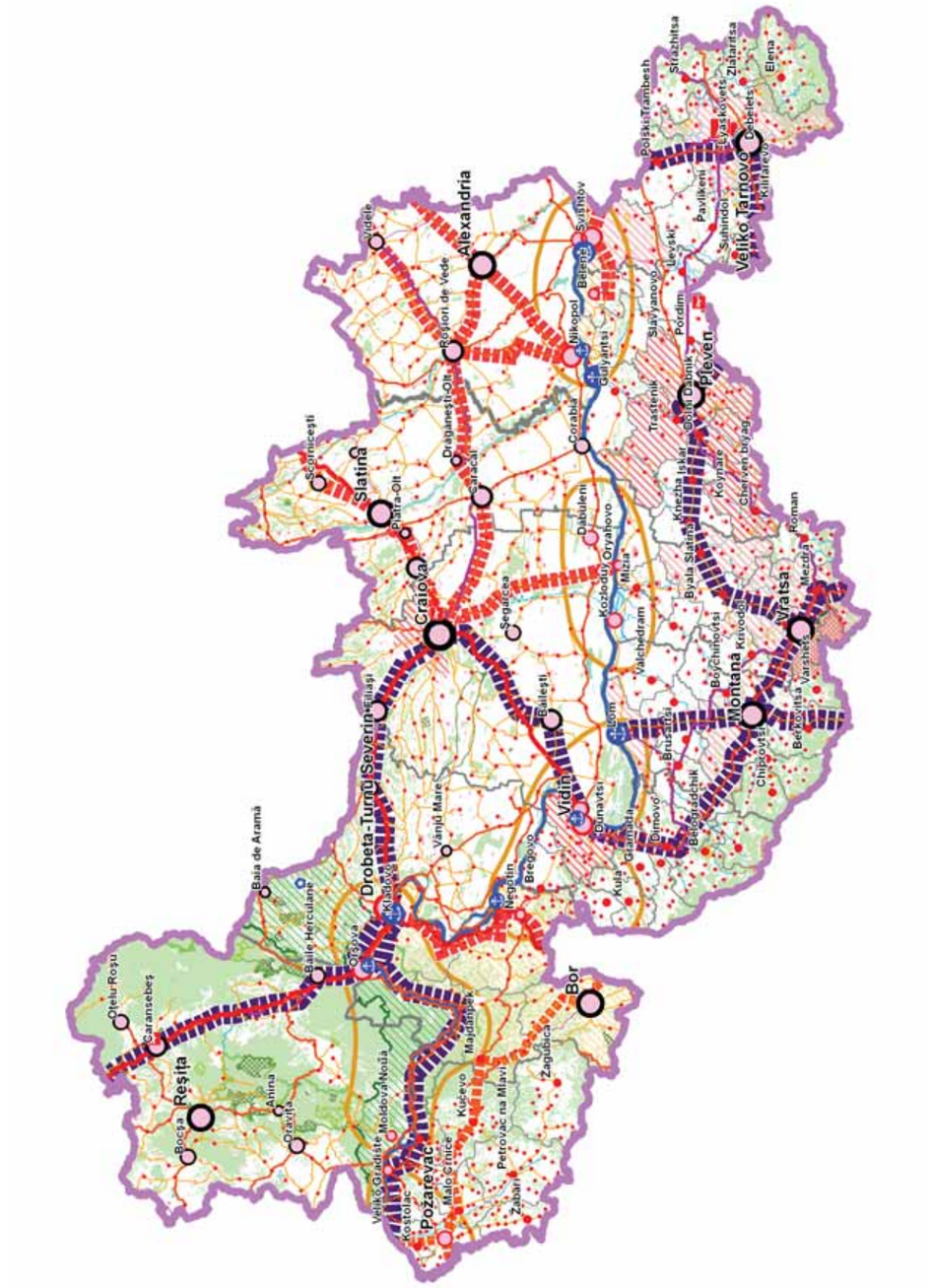
Key factor	Indicator	Environment oriented scenario		
		Pessimistic	Standard	Optimistic
Economy	GDP growth rate	<2%	1,5-2,5 %	>2,5%
	Unemployment rate inverse	-1	0	1
	Number of clusters	0	1	2
	Common R&D projects	1	2	2
Population	Vocational training efficiency	1	2	2
	Share of population with higher education	0	1	2
	Migration balance	-1	0	1
	Vitality index	-1	0	1
Water management	Share of dwellings with piped water supply	1	2	2
	Share of dwellings with sewage supply	1	2	2
	Capacity of water reservoirs	1	2	2
	Water pollution index inverse	1	2	2
Transport	Density of motorways	0	0	1
	Number of multimodal logistic centres	0	1	2
	Volume of transported goods tkm	-1	0	1
	Number of passengers pkm	1	1	0
Environment	Atmosphere pollution index inverse	0	1	2
	Landfill capacity	0	1	2
	Share of alternative energy sources	1	2	2
	Territory of protected areas	0	1	2
Tourism	Number of TDMs	0	1	2
	Tourist guest nights	0	1	2
	Share of foreign tourist guest nights	-1	0	1

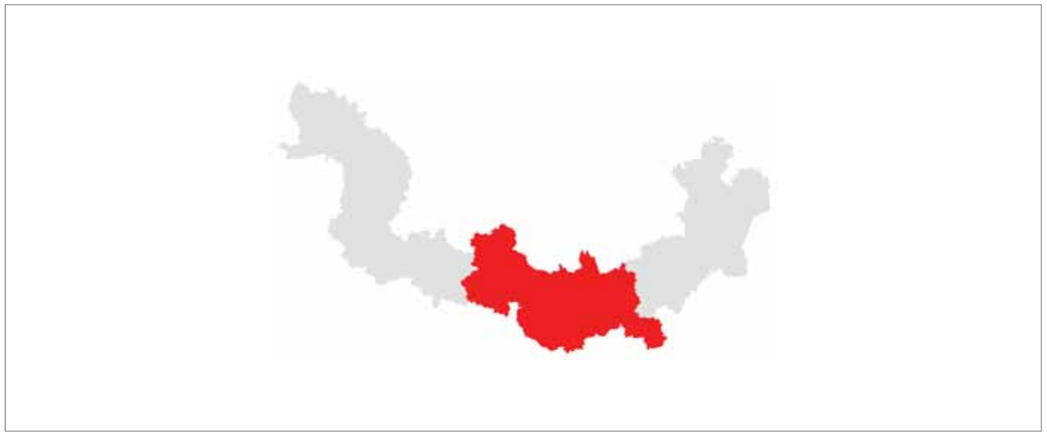
The attractiveness of the subregion increases resulting advantageous demographic changes. However, the positive turn of the migration balance may create social conflicts.

The spatial structure of the settlement system is influenced by suburbanisation process, but the environment orientation stimulates the utilisation of local resources and supply. This is particularly valid to the use of alternative green energy resources. The infrastructure development of water supply and sewage system is preferred in co-ordinated way. Special attention is devoted to solid waste management and recycling.

The environmental monitoring system is completed and continuously developed in trans-border co-ordination, and in line with local specalities. The monitoring system is connected to research and management activities on subregional level, establishing potential frames for the formation of the subregion into a “learning subregion”.

From touristic point of view the attractiveness and facilities of the subregion contribute to the dynamic increase of tourism, particularly in its touristic nodes. On one side service capacity development is necessary, on other side the regulation of visits to protected heritage territories (natural and cultural values equally) should be introduced. (see Table 27 Environment oriented scenario (see table on previous page)





SRB Subregion

Analysis

Natural Conditions

The Subregion SRB Serbia Romania Bulgaria consist of 14 NUTS 3 regions with the total area of 64 524 sq.km (19.9 % in Serbia, 30.3 % in Bulgaria and 49.8 % in Romania) and approx. 4 million inhabitants (21.2 % in Serbia, 26.4 % in Bulgaria and 52.4 % in Romania). In the terms of the project the Region includes five CDR (Crosdanube regions) – CDR 10: (Podunavska oblast (SR), Braničevska oblast (SR), Južnobanatska oblast (SR)), CDR 11 (Nuts 3 Regions: Borska (SR), Branichevska (SR), Mehedinti (RO), Caras-Severin (RO)); CDR12 (Nuts 3 Regions: Vidin (BG), Montana(BG), Mehedinthi(RO), Dolj(RO), Borski (SR)); CDR 13 (Nuts 3 Regions Dolj(RO), Vratsa (BG), Olt(RO)), CDR 14 (Nuts 3 Regions: Pleven (BG), Veliko Tarnovo (BG), Teleorman(RO)).

The area of the region is mostly plain with hilly and mountainous areas - the northern slopes of Stara Planina in Bulgaria, a small part of the Western Balkans in Bulgaria and Serbia and mountainous terrain in the southwestern part of Romanian zone.

The most common category of land use in the region is farmland with share between 70% and 80% in most of the regions (Serbia: Podunavska, Južnobanatska, Bulgarian and). The proportion is smaller in Braničevska oblast, Mehedinti (RO), Caras-Severin (RO) (50 - 60%). In the most mountainous areas this proportion is lower at the expense of forest areas (from 5-10% in plain areas till 40% in Romanian part of the region). Because of more flat and plain and hilly terrain and existence of fertile river valleys, the share of arable land is generally also high. It differs from 80 to 98% of farmland (in Podunavska in Serbia).

Built – up area differ from 4-5 to 11% in the regions, water bodies occupied about 3-4% of the territory. The rest of territory of about 3-4% belongs to the category of miscellaneous areas.

Settlement Structure

In the Subregion SRB live approx. 5,7 millions inhabitants.

In Romanian part of Subregion live 67.3% from the total population of the Subregion (3854223 inh. in 2008). The 4 Romanian counties have together 35 urban localities and 52.5% of its population lives in urban localities.

18.2% of the subregion's population or 1 040 100 people is living in its Bulgarian part. They are situated in 4 districts. The number of urban settlements is 51 and villages – 803.

In Serbian section of the Subregion the population is 834 115 inh. or 14.6% of the total population, living in 4 NUTS 3 regions.

The demographic situation in the Subregion SRB is characterized by a continuous trend for the population reduction in the area through negative natural growth, external and internal migration. For all contries' regions the natural population growth is negative and in this Subregion are situated the NUTS 3 regions with the worst national demographic indicators. The population decreased more in rural than in urban areas. In parallel with the decrease of the total population there is a marked trend for ageing of the population, especially concentrated in the rural areas, which have been abandoned by the working age group due to lack of livelihood.

There are different relative shares of education degrees in different part of the Subregion but as a whole the educational structure is not competitive in the predominate part of the Subregion.

There is a significant difference between urban and rural population with university and high school graduates concentrated mostly in urban centers, while inhabitants who have attained lower educational degrees are concentrated in villages.

The settlement structure of the subregion can be characterized as relatively balanced in some parts and uneven and with small centers with weak impact on the surrounding territories in other parts (especially Serbian section). The Subregion consists from border regions of the individual countries with few but relatively large settlements and vast agricultural areas. Different sections of the Subregion SRB occupy a different place in the structure of the settlement network in the Subregion. In general supporting centers of the settlement structure are located in good proximity to rural settlements.

In the Subregion are situated important Danube ARGE Region centers: Smederevo, Panchevo, Bor, Požarevac (Serbian section), Craiova, Resita, Drobeta Turnu Severin, Alexandria, (Romanian section), Pleven, Veliko Tarnovo, Vidin, Vratsa, Montana (Bulgarian section).

The common trends in the subregion are changes in the settlement network to increasing the percentage of small and very small villages at the expense of larger ones. More than 85% of the settlements in the Subregion have less than 5000 inhabitants and more than 25% of settlements have less than 2000 inhabitants. It constantly decreased the number of population from towns with more than 20,000 inhabitants, which should have been important centers to support the national settlement network. This decreasing led to the diminution of their roles and functions, at the decline of the development potential in their whole area of influence. The population decreasing was the effect of the economic decline, a part of inhabitants leaving the urban areas.

Transport

ARGE sub SRB is serviced primarily by two Pan European transport corridors - PETC No. 7 and PETC No. 4, and PETC No. 10, passing peripherally through the western part. In most southeastern part of the SRB pass PETC No. 9, serving only the balancing area.

PETC No. 7 is the Danube River corridor trough the hole territory of the subregion Serbia, Romania and Bulgaria and the core backbone node ports are Smederevo, "Danube Port" in Pančevo, Prahovo and Drobeta Turnu Severin, Vidin and Lom.

PETC No. 4 -Drezden/Nyurnberg – Prague -Viena/Bratislava - Györ - Budapest-Arad -Konstantsa/Krayova - Sofia-Solun/Plovdiv- Istanbul hosts international flows between Romania, Bulgaria and Greece through the Bulgarian section of the Vidin-Sofia-Kulata by providing a link between the Danube and the Aegean Sea. On the border between Bulgaria and Romania PETC No. 4 functions by the ferry at Vidin; the bridge Vidin / Calafat is under construction.

Through the territory of ARGE -SRB passes Priority axis No. 7 of TEN-T, along the route of PETC No. 4.

The region is situated on important road, railroad and naval arteries, at the intersection of the most important commercial ways towards Central and South-East Europe, towards Orient.

One E-road and two E-railroads pass through Podunavska oblast: motorway E75 and E 70 and E 85: Belgrade - Niš. The only E-road passing through Južnobanatska oblast is E 70. There is alSO one international railroad - E 66. European roads and railroads of international importance do not pass through Braničevska oblast. There is one E-road passing through Borska oblast. However, there is no railroad of international importance in this region.

Economy

Serbian part of the sub-region comprises 4 districts: Borski, Braničevski, Podunavski and Južnobanatski. There aren't any severe differences between the districts. The common features are much more – slight to significant increase of the regional GDP, a decrease and a very slight increase (Branicevski) of the economically active population. As for the employment rate during 2001-2008, there are some decrease in Borski and Podunavski, while in Južnobanatski and Braničevski even there is an increase.

In 2008, the employees worked mainly in the tertiary sector and a significant share of workforce was employed in industry.

Romanian part of the sub-region comprises 5 districts: Teleorman, Dolj, Mehedinti, Olt and Caras-Severin. There is some difference in the economic development of the Romanian districts in the sub-region: Teleorman district is prevailing the agricultural activity, since agricultural terrains represent main natural richness of the county. The low productivity of agriculture is typical for Dolj and Mehedinti districts, though a large percentage (39.5%-Dolj and 43,7% - Mehedinti) from employment in 2007 was in primary sector. Industry is developed and representative for both Dolj and Olt counties, representing the main sector of activity.

Bulgarian part of the sub-region Serbia – Romania – Bulgaria (SRB) consists of 5 districts – 4 of them (Vidin, Montana, Vratsa and Pleven) belong to the Northwest (Severozapaden) region, while the 5th one – Veliko Tarnovo district belongs to the North central (Severen centralen) region.

As a matter of fact these two regions do not have high values of economic development indicators. The Northwest Region is even the least developed region in terms of economy not only in the country, but in EU as well. This is to a large extent the consequence of the inherited economic potential and the relatively low degree of adaptation to the new economic conditions, which has resulted in a decline of the big industrial centers in the cities of Vratsa, Vidin, Mezdra, Montana and other industrial agglomerations on its area. In spite of the fact that during the last years the two regions have marked some progress, these two regions are lagging behind the other regions of the country and the EU.

Despite some unfavorable statistic data of the economics of the Bulgarian districts within the sub-region (SRB) and its slight contribution to the economic development of the country, that part of the sub-region has some potentials for its economic growth. In the last years it has some rate of increase, but still it's not enough neither to reach the average for the country, nor the average level of economic development in EU.

Documents

- European Spatial Development Perspectvie
- Strategy Europe 2020
- Strategy of Euroregion Lower Danube
- The EU Strategy for Danube Space

Republic of Serbia

- Spatial Plan of the Republic of Serbia 2010 - 2014 – 2020
- Implementation Programme of the Spatial Plan of the Republic of Serbia for the period 2011-2015
- Waste Management Strategy for the period of 2010-2015
- Spatial Plan of the Special Purpose Area of a Part of Industrial Zone North-East in Smederevo
- Spatial Plan of the Special Purpose Area of Oil Products Pipeline through the Republic of Serbia
- Master Plan of the Tourist Destination "Lower Danube"
- Master Plan of the Tourist Destination "Stig - Kučaj Mountain - Beljanica"

Republic of Romania

- The National Development Plan 2007-2013
- The Strategic National Plan 2007-2013
- National Strategy for Sustainable Development of Romania 2013-2020-2030
- The National Strategic Plan for Rural Development 2007-2013
- The Strategic Concept of the Spatial Development in Romania 2030
- National Strategy for Biodiversity Conservation
- National Strategy for Ecotourism Development in Romania
- The Master Plan for the Development of National Tourism in Romania 2007-2026
- The Operational Sectoral Program for Environment 2007-2013
- The Operational Sectoral Program for Transport

Republic of Bulgaria

- Operational Programme "CBC Romania-Bulgaria 2007-2013"
- Draft working papers on preparing National Development Program "Bulgaria 2020", May 2011 http://www.strategy.bg/Publications/View.aspx?lang=bg-BG&Id=115
- National Reform Programme 2011-2015
- National Strategic Reference Framework 2007 –2013
- National Strategy for Regional Development 2005-2015
- National Environmental Strategy 2009 – 2018
- National Strategy for Development and Management of Water Sector by 2015

External factors – measures in SRB ARGE Subregion

Key external factors identified in national and transnational documents concerning SRB Subregions are as follows:

- Improvement of road and ferry crossings and associated infrastructure to allow increased flow of people and goods throughout the Danube
- New ports and modernization of the existing ones
- Improving the network of combined transport terminals
- Improvement of navigation on the Danube
- Development of transport infrastructure, which offers improved flow of traffic, access and mobility in the whole region
- Increase the renewable energies in the total electricity production
- Diversification of energy supply, building the necessary infrastructure for accelerated domestic gas
- Development of the information society
- Promoting a more resource-efficient and more competitive economy
- Supporting the technological development and innovations
- Increase the productivity and efficiency of the SME sector
- Development of regional and local business-infrastructure for establishment of SMEs and clusters

SWOT Analysis

STRENGTHS

- Rich biodiversity. including habitats and populations of wild birds on the Danube River
- Balanced settlement structures
- Railroads of international importance
- Well developed electric network
- High potential for agricultural production

WEAKNESSES

- Old contamination from massive industrial activity
- Population decrease
- Multimodal terminal infrastructure is insufficient developed
- Amortized water supply network - great water losses
- Technological backwardness and low competitiveness of the economy

OPPORTUNITIES

- Ecological restoration of habitats and species
- Development of continuous training/education programs for lifelong learning

- Development and upgrade of infrastructure at multimodal/intermodal terminals
- Exploring the possibilities of using other RES, except hydropower
- Development of alternative tourism – cultural, cave tourism, spa, eco-tourism

THREATS

- Pollution of the tributaries of the Danube
- Increased socio-economic development gap between rural and urban areas
- Underestimation of the potential of the water transport
- Limited Internet access for small settlements
- Delay in development of the knowledge-based economy

Scenarios

Optimistic

The optimistic scenario assumes greater access to EU funds, sustainable economic growth in the EU by 2020, Long and sustainable GDP growth in Bulgaria, Serbia and Romania.

Under these conditions it is expected that the targets of the national programming documents for transport and technical infrastructure and dramatically increase accessibility to services offered by European standards. Sustainable development of the Danube corridor to increase the prosperity of citizens and create a normal climate of economic and social development by capitalizing the existing potential on boths sides of the Danube in SRB ARGE Subregion, including cross-border impacts.

Energy efficiency is a key issue of the modern society. On the other hand energy independency of the region is important for a sustainable development. Increasing of the renewable energy sources is a good approach to reduce the dependency on imported energy on resources to produce energy. The region is recognized having a good potential for solar and wind.

Infrastructure for production and delivery of electricity will be reconstructed and modernized.

Regarding economy optimistic scenario for the sub-region Serbia – Romania - Bulgaria is based on the following main assumptions:

- A high access to European funds (80-100%) by 2020
- A sustained economic growth in European Union by 2020
- A continuous and sustained GDP growth in Serbia, Romania and Bulgaria by 2020.

Having in mind the available resources (primary and secondary), as well as the tendency of the economic development, given at the strategic and planning documents at different level, concerning the territory of the sub-region we assume the best situation, the best indicators that could be achieved for a balanced and sustainable economic development. However we are forced to consider that, in spite of the optimistic way of thinking, there will be some clearly impossible facts and we assume them in the most favourable way. So, the optimistic scenario include:

- Increase in the labour productivity in line with the EU values
- Increase of the employment and decrease of the unemployment SO as to diminish the disparities in the socio-economic development (urban-rural territories)
- Increase of the average monthly salary, especially where they extremely low
- Improving the quality of life by trying to reach EU living standards
- A rapid growth of service sector, increase in the number of SMEs, development of high-tech industry and business infrastructure.

Pessimistic

With limited access to European funds, continuing economic crisis in the EU and insufficient funds for the implementation of national policies for transport and technical infrastructure is expected the Pesimistic scenario.

This would only be realized the most important projects in the national programmes for transport and technical infrastructure related to the functioning of the TEN-T / SO with some compromises in technical parameters / and more limited actions aimed at increasing accessibility.

Infrastructure in the directions of the European transport corridors No. 10 and No. 4 will be upgraded, but not with European standards. The first class roads in international destinations will be upgraded, but the modernization of railways in these areas will lag.

Construction of new bridges over the Danube will be not realized.

The reconstruction of regional roads will be partial, ring roads around major cities for the removal of transit traffic will not be released the, leading to congestion and air pollution

The infrastructure for production and delivery of electricity will be renovated and modernized; the use of renewable energy potential will be limited. HAKE “Nikopol-Turnu Magurele” will be not built and will slow the absorption of the energy potential of the Danube River.

Will be delay in implementation of the natural gas. The natural gas network will be developed, but slowly and the gas for households will continue to lag behind the EU countries. Projects for new pipelines will be implemented, but later.

Regarding economy pessimistic scenario for the sub-region Serbia-Romania-Bulgaria is based on the following main assumptions:

- A poor access to European funds – less than 50% (40-55%) by 2020
- The intensifying of the economic crisis in the European Union
- Insufficient funds to implement national policies in Serbia, Romania and Bulgaria.

As a result of this, the tendency, given at the EU and national strategic and planning documents would not be able to be fulfilled. If there will be any progress, it will be too small and it will not bring to some real positive changes. So, the situation in this case is going to be the following:

- A slight and unbalanced GDP growth
- The prolonged economic crisis will affect the living standard (GDP/inhabitants) – increasing the poverty and the developing the “black” and “grey” economy
- As there was some closure of big industrial enterprises (Bulgaria – during the transition period), some traditional sectors (textile, manufacturing) would continue to disappear
- The touristic infrastructure, if there is any, as well as touristic services, will continue to decline and will not be able to attract significant external investors – there will not be any significant development in tourism.

Realistic

With moderate access to European funds, stabilized economic situation in the EU and moderate and steady increase in GDP in Bulgaria, Serbia and Romania it can be expected the realization of most of the projects of national programmes, but with some limitations and deposition in the time.

The technical infrastructure will grow at a moderate pace, the barriers in access to public utilities will be related mainly to financial difficulties for use, although technically insured options.

Infrastructure for production and delivery of electricity will be reconstructed and modernized. The utilization of the potential of renewable energy potential will suffer delays due to expected changes in regulations for construction and purchase of electricity. HAKE “Nikopol-Turnu Magurele” will remain as a project to absorb the energy potential of the Danube.

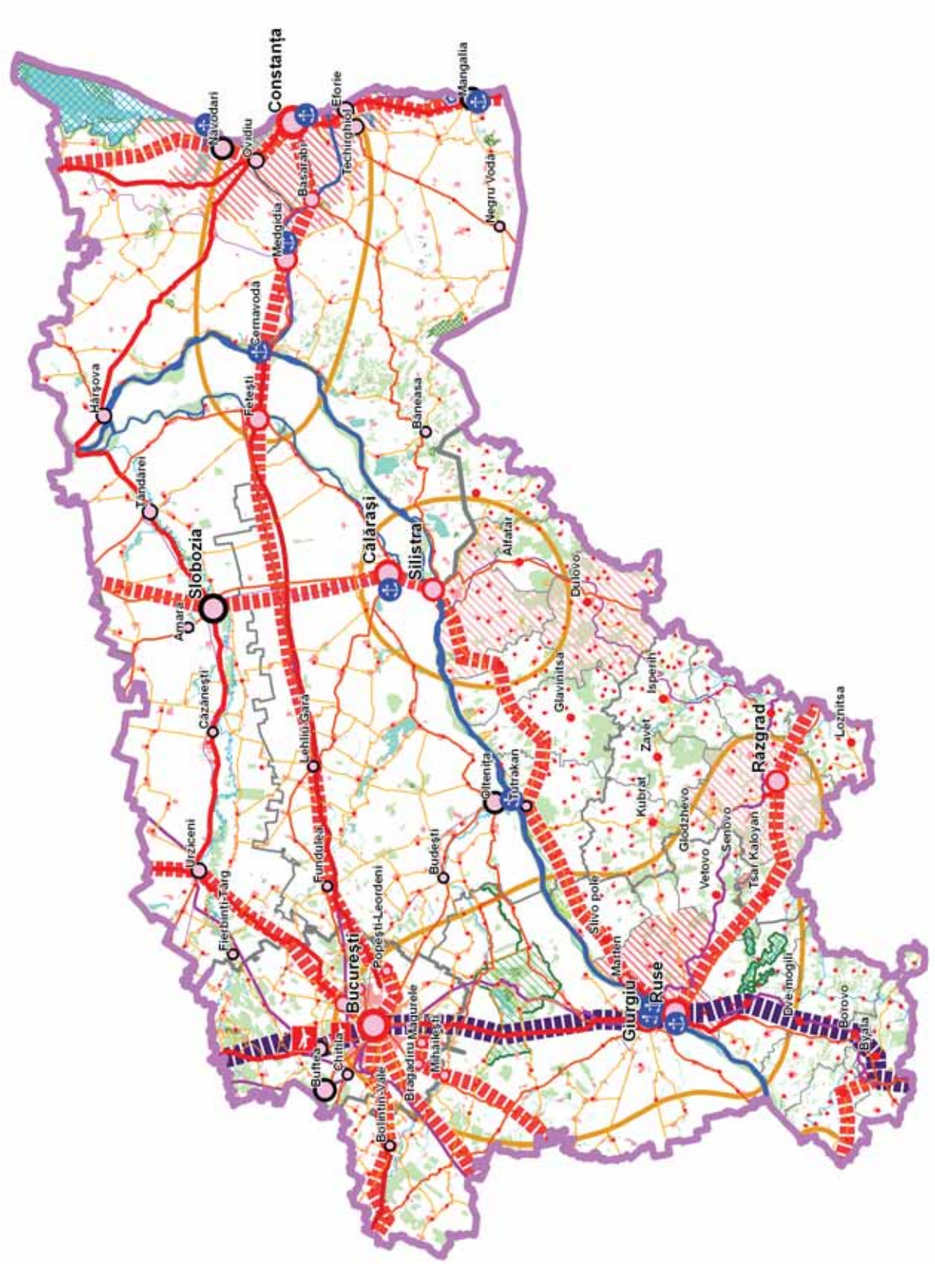
Natural gas network will be developed and technically accessible to more households, but the increase in gas prices will negatively affect the pace of development and household gasification will continue to be lower than in the EU. Projects for new pipelines will be implemented SO that other areas can be gasified.

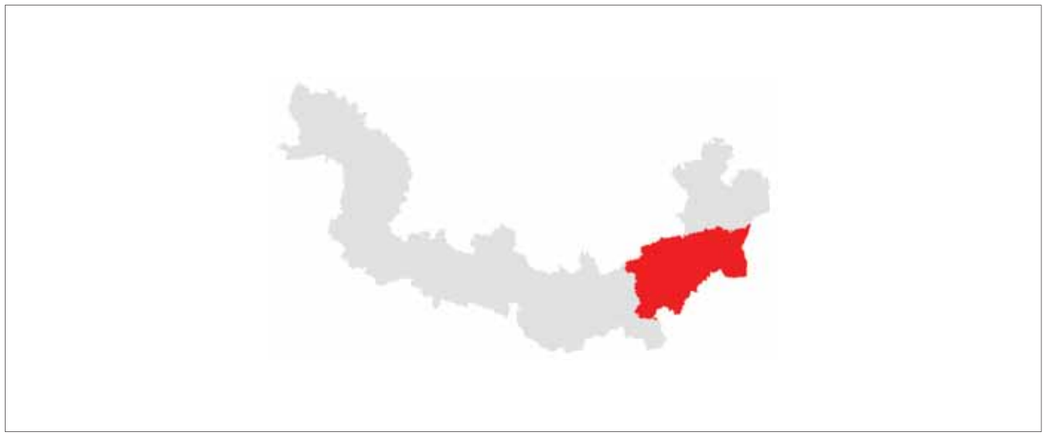
Regarding economy realistic scenario of the sub-region Serbia – Romania - Bulgaria is based on the following main assumptions to happen by 2020:

- A medium access to European funds (55-80%) by 2020
- A stabilized economic situation in the European Union
- A moderate and steady GDP growth of Serbia, Romania and Bulgaria by 2020.

In the realistic scenario we consider some of the tendencies and recommendations, given at the strategic and planning documents at different levels, to be possible to happen and some other – not possible to happen by 2020 because of some strong external factors. Of course, there is a risk some of the assumptions (positive or negative) not to happen, but as a whole the realistic scenario gives a real picture of what may happen by 2020 if, there is no extraordinary circumstances. What is going to happen according to the realistic scenario is as follows:

- Enlargement of service sector, growth of industrial and high-tech parks and business incubators
- Development of ecological agriculture and probably establishment of agricultural-industrial parks
- Development of new kinds of tourism – cruise tourism, hunting, fishing, rural tourism
- Increase in labour productiveness
- Development of cross-border cooperation will contribute to the economic and regional development of Serbia, Romania and Bulgaria.





RBB Subregion

Analysis

Natural Conditions

The RBB Sub-region consists in 6 NUTS3 regions from Romania and 3 from Bulgaria. It has 30,053 km2 and is bordered to the East by the Black Sea.

The Bulgarian part is included in the Danube plains geographical area, which is characterized as plain near the Danube terrace and becomes hilly in the southern parts of the Subregion. The Romanian part has alSO a plain relief. Its western part belongs to Vlasiei Plain and Romanian Plain and its eastern part is included in Dobrogea Plateau (Constanta county is also situated at a low altitude).

The Bulgarian part includes significant tributaries of the Danube River – the rivers Yantra, Rusenski Lom, Osam and Yantra. 11 dams have been constructed here.

The Romanian part is included in the hydrographic basins of Arges, Ialomita and Mostistea rivers. The Dambovita river is crossing Bucharest on 16.2 km. Colentina river has numerous crooks with ponds forming at the entry in Bucharest a chain of natural lakes. In Calarasi-Silistra area the Danube River is divided in two arms - Borcea on the left side and Old Danube on the right side - that together are closing Ialomita Pond (or the Great Island of Ialomita). The most important hydrographic unit in the Sub-region is the Black Sea. Its hydrographic network contains watercourses (like the Danube) and is enriched by the exploitation of channels like the Danube – Black Sea Channel (on 64.2 km) and Poarta Alba – Midia Channel (on 27.5 km). There are alSO irrigation channels, natural and meadow lakes and lagoons, resources of thermal waters in salty Lakes Amara and Fundata.

The sub-region is characterized by agricultural areas. The agricultural landscapes belong to the so-called “cultural” or human modified landscapes, the Danube meadow being embanked and channeled on large areas, being transformed into agriculture terrain.

Floods along the Danube threaten with serious hazards the coastal communities as well as the natural and agricultural areas within the floodplain of the river areas. The last major flood in the area Ostrov- Silistra was in 2006.

In the rural part the specific activities related to daily life of residents represent air pollution sources. Thus, these sources typically generate rural pollutants, but they do not constitute a real threat to the environment because they are not exceeded maximum permissible concentrations. Surface waters draining the villages are assessed as being unpolluted.

Settlement Structure

In Sub-region, Bucharest is the main administrative, finance, cultural, educational and research centre from Romania, an important transport centre, center of national and international importance, with European influence. It is a national pole, considered to be of rank o as hierarchy and functioning as an urban system together with Ilfov county (which has an increasing urbanization process). Its specific urban development problems are specific to big cities: small area, predominant vertically development, lack of green spaces, intense car traffic especially in the central part of the city, atmosphere pollution generated by car traffic and heating systems.

The Sub-region owns one of the most representative tourist facilities, the Romanian Black Sea coast representing one of the most important tourist areas in Romania.

Constanta Municipality is the second big important city in the region, ranked as the second urban agglomeration after the capital city of Romania. Its influence on the proximity area has led to the establishment of the Constanta Metropolitan Area, which can become important management tool in order to promote common projects for the integrated development of the area, to attenuate the disparities in the development of localities and to facilitate the attraction of Structural Funds.

Geographical location is favorable for crossing the territory of Ruse district of two European transport corridors (No.7 and No.9), which are respectively the connection between the North Sea and the Black Sea and the Baltic and Mediterranean Sea. Through Ruse takes place and the connection on the Bulgarian territory between the Danube and the Black Sea (Ruse-Varna). Ruse is the fifth largest city in Bulgaria, the biggest Bulgarian port on the Danube River and ranks among the "big cities", with well-developed agriculture and traditional concentration of population, economic, cultural and social activities.

The development advantages of Giurgiu county are influence by its placement on the pan-European transport networks no. VII and IX, by its agricultural potential and by the proximity to Bucharest. The circumstance that Giurgiu belongs to the conurbation around the capital can become an opportunity for the development of some service sectors necessary to the economical activities from the capital.

The settlement structure of the districts can be characterized as relatively well-balanced and evenly developed. Supporting centers of the settlement structure - small towns are located in good proximity to rural settlements. This suggests opportunities to further improve city – village connections.

The nature of economic activities and the degree of urbanization defines Silistra and Calarasi districts as rural regions. They are peripheral areas with regional importance in the settlement structure, fertile land, and available water sources, especially the Danube.

The town-seats Giurgiu, Slobozia and Calarasi are considered to be of rank II as hierarchy, as well as other municipalities belonging to Sub-region. Calarasi, Oltenita and Fetesti are riparian Danube municipalities.

Transport

The Sub-region is served by the Pan-European Transport Corridors (PETC) No. 7 (the Danube), No. 9, and No. 4. The transport axis Ruse-Razgrad-Shumen/Varna is a connection between the Danube and the Black Sea, respectively, between PETC No. 7 and PETC No. 8. Pan-European Transport Corridor No. 9 conducts international flows between Romania and Bulgaria through the bridge over the Danube River at Ruse.

Bucharest is a major traffic hub, eight railroad lines linking Bucharest to all the country. The link between Bucharest and Giurgiu is realized by road and by rail. Both the rail component and the road follow the route of Corridor IX Urziceni - Bucharest - Giurgiu / Ruse.

Giurgiu county is crossed by the highway A1 Bucharesti--Pitesti. A second highway (A2) is crossing the RBB Sub--region. In future, 3 new highways will start from Ilfov county.

The peripheral location of some parts of the Sub-region partly determines a lag in the development of the road network, the local roads having unsatisfactory technical condition.

Railway infrastructure is very well developed in some cross-Danube regions (like in CDR15), with the possibility of direct cross-border transport of people, goods and cargo through the combined bridge Ruse/Giurgiu. Some railways have European categorization, but their parameters do not meet the requirements for a component of PETC, rehabilitation and modernization being necessary. Railway station Ruse has strategic importance for combined transportation by transport corridors PETC No. 7 and PETC No. 9, but the parameters of the two main railway lines do not meet the requirements for components of PETC. In Constanta there is a terminal of combined transport. Other component CDRs have limited railroad infrastructure (like CDR 16), with a regional character and local importance.

The Port of Ruse is the biggest river port in Bulgaria and a key multimodal connection between PETC No. 7, PETC No. 9 and TRACECA Corridor - Uzbekistan - Azerbaijan - Georgia - Bulgaria – Europe, being included in the European Agreement on Main Inland Waterways (AGN). The favorable location of the ports complex and their equipment make it possible to participate in combined transport, associated with the development of trans-European transport corridors. In relation to the national fluvial traffic of goods, Giurgiu port is occupying the third place following Galati and Tulcea.

There are important ports at the Black Sea (Constanta is the biggest), at the Danube, and on the Danube-Black Sea channel, which belongs to the European Fluvial corridor Rhin-Main-Danube, ensuring the connection between the ports Rotterdam and Constanta. Many fluvial ports have unsatisfactory infrastructure and their poor activities are diminishing the use of their existent potential.

The presence of ferries allows for direct cross-border contacts.

The Friendship bridge across the Danube is linking Romania to Bulgaria, having road and railway levels, and a pedestrian sidewalk. Other Danube bridges are situated in Constanta County, at Fetesti (Ialomita County) and Cernavoda (Constanta County).

Air accessibility is ensured in the RBB Sub-region by Bucharest international airports "Aurel Vlaicu" (recently closed) and "Henri Coanda" (Otopeni), and by M.Kogalniceanu international airport near Constanta. There are alSO other smaller/regional airports, like Silistra airport.

It is an idea that Ruse Airport to be developed as complementary to Bucharest airport, because Bucharest airports are too busy and cannot cope with huge traffic. In these days it is in plan the construction of a new airport in Giurgiu county.

Economy

There is a clear polarization in the level of the economic development of the cross-Danube regions that constitute the Sub-region, between the high economically developed Bucharest municipality, Constanta city or Ruse district and the less developed ones, such as Calarasi and Silistra districts.

Big cities like Bucharest and Constanta have a very dynamic economy, most of active population working in services and industry. In Bucharest, the main sectors that are contributing to the regional VAB are real estate transactions, renting and service activities, manufacturing, trade, transport storage and communications, constructions. Bucharest-Ilfov region is situated on the first place regarding direct investments, with 60.6 % from total direct investments in Romania in 2005. In 2009, due to global and national economic crisis, it was observed a visible decrease of investments and implicitly of the industrial sector.

The economy of Constanta County is based upon naval industry, transport and trade, due to its geographic advantageous position. Industry and services are concentrated in main urban centers and are very low represented in rural area. Main industrial branches are: petro-chemical industry, engineering, naval construction and platforms for marine drilling, clothing. In Constanta County, important touristic destination, the activities in the hotels and restaurants had the highest shares from all Romanian Danube counties. Here were observed the highest shares in activities of transport, storage and communications due to transport and storage activities from Constanta harbor.

Ilfov county has alSO a very dynamic economy, with many persons employed in agriculture sector. Ilfov county is experiencing a significant transformation of its industrial profile: from source of workforce of big industrial producers from Bucharest to promoter of alternative industrial branches such chemical, textile, electronics, film. Continued expansion of Bucharest has influenced the development of services (tourism, entertainment) and the construction industry by developing a large number of residential complexes.

The service sector is leading in Ruse and Razgrad districts. Ruse district occupies a place within the first third of the national rating with its average economic development while Razgrad district only slightly over-exceeds the average values.

In Giurgiu county is prevailing the agricultural activity. AlSO the activity of aquaculture is very fast developing in the last years within the fishing facilities. Industrial activity in Giurgiu county is diverse, with no clear economic specialization (there are skilled workers in heavy industry and in shipping industry). The diversity of economic specialization of Giurgiu companies is the result of the connection of the county to one of the most important European routes, the European road E 70 and to the Danube river port connection through Giurgiu port. The small number of existing companies in Giurgiu county is generated both by a weak entrepreneurial culture and by business migration to Bucharest. Currently there is a migration to the economic pole of Bucharest, located in close proximity to the county.

Location and natural conditions of Ialomita, Silistra and Calarasi districts determine the forefront of agriculture and manufacturing industry in the economic structure. Business opportunities provided by the vicinity of the Danube and the opportunities for cross-border business relations, for the moment remains rather under-utilized. Currently, tourism is not an important sector in their economy, although is providing favorable conditions and potential for tourist segments based on the protection, promotion and enhancement of local cultural heritage, authentic traditions and natural resources.

The tourism is developed mainly in the Black Sea area, Constanta municipality concentrating 43% from the national tourist potential and 2/3 from the tourism resources, representing one of the most important tourist areas in Romania. In some parts of RBB sub-region tourism is not considerably developed. There are certain perspectives for the development of cultural and eco-tourism. Their tourism potential county allows the development of different types of tourism: cultural, religious, green tourism.

In the Sub-region, Bucharest and Constanta County had the highest GDP in 2006 (19545 and 4150 mill.Euro). Districts Giurgiu, Silistra and Calarasi are characterized by low economic development, their contribution in the national economy being very modest (Giurgiu county had the lowest GDP (701.7 mill.Euro) in whole Romanian Danube area and Calarasi county had the lowest GDP/inhabitant (2399 Euro/inhabitant). Silistra district occupies one of the last places for its contribution to GDP and unemployment rates in recent years

Of importance are the cross-border and trans-regional aspects of employment, for which no data are available. Cross-border initiatives and international partnerships within the Danube strategy would be a particularly appropriate approach in this area, providing financial resources and leading to introduction of good European practices for such activities.

Documents

The National Strategic Concept of Spatial Development 2007-2030 (Romania)

According to this document, the general objective is Romania's integration into the European Union by:

- the assertion of its regional continental identity and by
- increasing the spatial cohesion and the sustainable territorial development

National Development Plan 2007-2013(Romania)

The global objective targets the rapid reduction of the social and economic development disparities between Romania and EU member states. It is aiming a competitive, dynamic and prosperous Romania.

National Strategy for Regional Development (Bulgaria)

Main objectives of the NSRD are:

- Strengthening the relationship city-region improving socio-economic integration
- Development of cross-border cooperation
- Construction and improvement of environmental infrastructure
- Development and modernization of the elements of regional and local transport infrastructure
- Improving accessibility and the elements of technical infrastructure
- Protection and valorization of natural and cultural heritage

National Strategic Reference Framework 2007 –2013 (Bulgaria)

The global objectives are:

- Common strategy for sustainable spatial development of cross-border region Bulgaria – Romania
- Reconstruction, repair and rehabilitation of the Danube scenic route
- Spatial scheme of the Danube riverside
- Improving basic infrastructure
- Using renewable energy sources

European Spatial Development Perspective

General objective of the document is achieving the balanced and sustainable development of the territory of the EU:

- Economic and social cohesion
- Conservation and management of natural resources and the cultural heritage
- More balanced competitiveness of the European territory.

External factors – measures in RBB ARGE Subregion

Key external factors identified in national and transnational documents concerning RBB Sub-region are as follows:

- to join the European and intercontinental network of the centers and corridors
- to structure and develop the urban settlement network
- to promote balanced services and opportunities between urban and rural communities
- to strength and develop the interregional connection
- to enhance the natural and cultural heritage
- to increase economic competitiveness and to develop the knowledge-based economy
- to develop and modernize the transport infrastructure
- to protect and improve the quality of the environment
- the human resources development, promoting employment and social inclusion and strengthening the administrative capacity
- to develop the rural economy and to increase productivity in the agricultural sector
- to reduce the development disparities between the regions.
- to secure spatial cohesion at regional, trans-regional and inter-regional level
- integration of sectoral and spatial development plans on medium and long terms
- acceleration of urbanization and modernization of rural areas
- development of the legislative, institutional and technical framework
- ensuring cooperation and participation in spatial planning and cohesion
- starting the implementation of plans for the entire region of the Danube River for control of the flood risk
- reduction of the areas affected by soil erosion
- improve navigation on the Danube
- construction and development of plants for renewable energy sources

SWOT Analysis

STRENGTHS

- diverse and rich biodiversity (the Danube Delta Biosphere Reserve, the Black Sea, the Danube, protected natural areas, RAMSAR sites, Natural and National Parks)
- important multifunctional cities, city-ports and agglomeration areas
- developed education structure in urban areas
- high accessibility, multimodal transport, the access to the Black Sea
- high levels of GDP, activity rate and employment in the big cities of the region
- developed service sector

WEAKNESSES

- seismic and flood risks, intense dryness and drought phenomena, environment pollution
- migration of the qualified work force to the big cities and abroad
- low percentage of settlements connected to the natural gas network
- heavy traffic nearby the big cities
- large economic disparities between different parts of the region
- low agricultural productivity

OPPORTUNITIES

- air monitoring with new automatic stations
- labor force occupancy in tourism
- valorizing the natural richness by the development of agricultural production, including the organic products
- construction of Bucharest – Danube Channel, construction the bridge Silistra – Calarasi, extension and modernization of multimodal platforms
- possibilities to extend the inexpensive electric and thermal energy from unconventional sources (wind nuclear energy, biomass), investments in nuclear energy - reactors 3 and 4 from Cernavoda Nuclear Power Plant

THREATS

- increasing quantities of municipal waste
- continuing deterioration of the land use structure
- un-controlled tourism
- lack of employment opportunities in rural area and in small cities
- outdated local roads networks
- inadequate waste management and its non-selective collecting
- lack of facilities offered to foreign investors can reduce the volume of investments

Scenarios

Optimistic

Optimistic scenario for Romania-Bulgaria Sub-region is based on the following assumptions:

- A high access to European funds (80-100%) by 2020
- A sustained economic growth in European Union by 2020
- A continuous and sustained GDP growth in Romania and Bulgaria by 2020.

In this context it is likely that most dwellings will be connected to drinking water and sewage systems, wastewater treatment plants will exist in most localities and the integrated waste management system will be implemented until 2020. The protected areas will be extended, the coastal area will be protected, and measures for natural risk abatement will be applied. There will be implemented measures for land consolidation, maritime flora and fauna species endangered by economic activities and industrial fishing will be protected, and the degraded and industrial polluted areas will be refined and ecologically re-constructed. The air and water pollution will be monitored with new automatic stations, reducing environment pollution by exploitation and production of electric energy of/from existent non-renewal resources.

The social and economic gap between urban and rural areas will be maintained, but with a considerable improvement of living conditions in rural areas. In agglomerated urban areas is estimated to be developed social services at European level. Still, medium and small cities will be lacking in coverage of social services at high standards and in rural areas the process of depopulation and aging population will continue, but school dropout and social exclusion will decrease sharply and employment rate will increase significantly. Cross border social programs will impact a large number of persons living in the area, due to an increased accessibility and to the experience of local authorities. A plan for landscaping along the Danube coast for Romania and Bulgaria will be designed.

The optimistic scenario assumes a sharp increase of accessibility to most technical infrastructures in the region and implementation of large investment projects. Impediments that will alleviate problems related to technical infrastructure of the area will be mainly related to increased transportation costs of goods and people, higher costs of electricity and natural gas, the Calafat-Vidin bridge construction that will reduce the traffic of goods and people in Giurgiu-Russe border region and the delay of cross-border projects such as Silistra - Calarasi bridge construction.

In optimistic scenario, forecast for 2020 indicates a high GDP growth, with significant increases in all economic sectors, but alSO a simplification of legal and administrative procedures and implementation programs to encourage foreign and local investors. The engine of this growth will be the direct and indirect investments. A decisive role in economic development will have strategic investors in the area that could lead to vertical development of economy. In these conditions the optimistic scenario assumes a rapidly growing service sector in the context of rapidly developing small and medium enterprises, the development of high-tech parks and industrial parks, creating public-private partnerships for the benefit of industrial development, developing cross-border cooperation for achieving a stable growth and attracting investments, rehabilitation of industrial sites and using their terrains for the development of new enterprises, exploitation of the energetic potential – construction of Cernavoda reactors 3 and 4, promotion of solar and wind parks – , supporting the business infrastructure, set up of a center of economic cooperation in the Black Sea basin (international stock exchange).

In agriculture sector is expected an increased productivity by farmers associations, creation of agricultural-industrial parks, the demand of ecological agricultural products, development of irrigations systems, promotion of local, traditional food products, supporting the wine-growing farms, new technologies and brands promoting and set up of a fish stock exchange.

The main risks in achieving the optimistic scenario for 2020 are globalization, increasing the un-loyal concurrence, migration of young people towards urban areas, low labor productivity compared with European average, increasing economic disparities between different parts of the region and the competition in agriculture and tourism sectors.

Pessimistic

Pessimistic scenario for sub-region Romania-Bulgaria is based on the following assumptions:

- A poor access to European funds (40-55%) by 2020
- The deepening of economic crisis in the European Union

- Insufficient funds to implement national policies in Romania and Bulgaria.

Pessimistic scenario for 2020 indicates a wide range of issues like poor water supply and wastewater treatment, weak waste management and soft law enforcement on biodiversity protection, natural and cultural heritage. There will be not sufficient measures to prevent and combat natural phenomenon caused mainly by climate change.

Urban-rural gap will increase; the big cities will be developed from the social economic point view, while rural depopulation phenomenon will occur in some areas that will have an aging population and a low access to social services.

Pessimistic scenario foresees an increase of accessibility on TEN-T priority axes - VII, XVII and XXII together with the increasing of economic role of the Danube and Black Sea, but with underdeveloped infrastructure in the context of restraining the volume of good and passengers in Danube ports. The railway network will not meet significant improvements, accessibility rail corridor IX remaining still very low, and many areas in Sub-region will remain with a low access. Traffic in big cities will be getting higher, leading to traffic congestion and air pollution. Water supply and sewer will expand significantly in the region, but a small share of population (both in Romania and in Bulgaria) will be connected to the gas system. Internet access will be limited in smaller towns and in rural areas. Using renewable resources, rehabilitating and upgrading electricity power installations will be slow, leading to high costs to produce and transport electricity in these countries. Other major projects will be delayed or postponed such as Bucharest-Danube canal construction or building the bridge between Calarasi and Silistra localities.

Pessimistic scenario assumes a moderate growth of the region, with faster GDP growth in main urban agglomerations (Bucharest, Constanta, Russe) and with a slow growth in other areas, with negative consequences on increasing disparities between different areas of the region and continuing effect of population migration from poor areas to large urban areas or abroad. Also, there will be the migration phenomenon of the educated and young population from large urban areas due to insufficient investment in high technology domains to ensure motivating salaries. The agricultural sector will have a significant increase by implementing and practicing modern intensive agriculture. The tourist potential will be insufficient highlighted due to lack of tourism infrastructure in many parts of the region and lack of business tourism infrastructure.

Realistic

Realistic scenario for sub-region Romania-Bulgaria is based on the following assumptions:

- A medium access to European funds (55-80%) by 2020
- A stabilized economic situation in the European Union
- A moderate and steady GDP growth of Romania and Bulgaria by 2020.

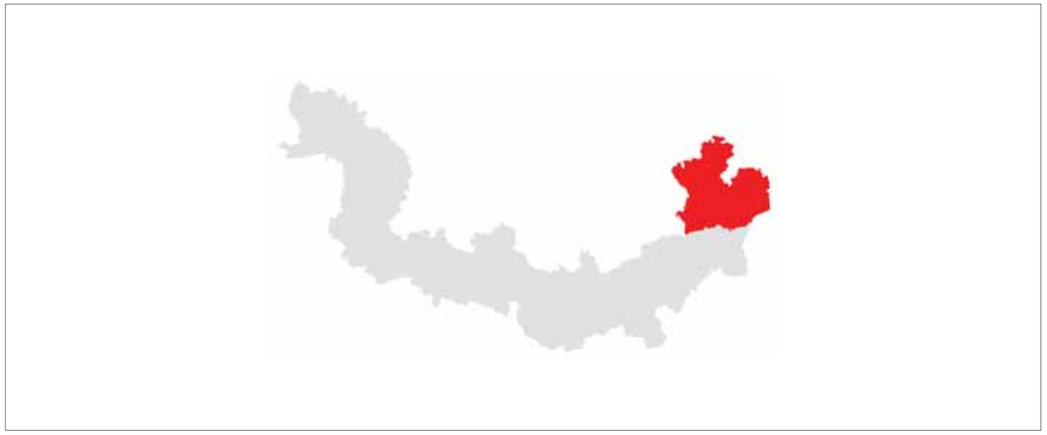
In the realistic scenario, the water supply, sewage and wastewater treatment systems, as well as the waste management will be implemented in accordance with European legislation in most localities. Programs to combat climate change and to prevent destructive natural phenomena such as floods, landslides, erosion will be implemented. These measures will not eliminate all natural phenomena, but may diminish them in a proportion of over 50%. The issues related to biodiversity and landscape protection will still exist, due to a low share of trained staff applying environmental legislation and to a weak public awareness on environmental protection.

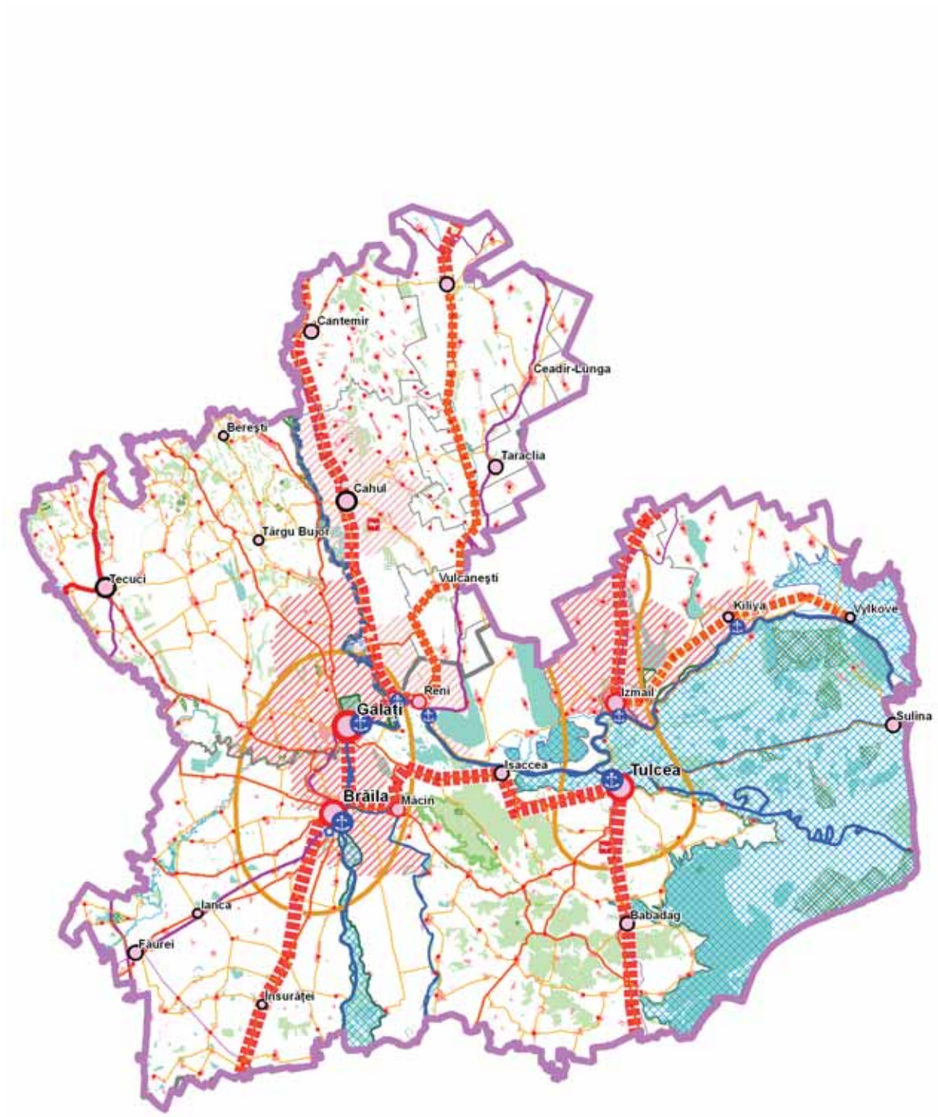
In the realistic scenario, the social gap between urban and rural will be maintained or even will increase, the dynamic of economic development in large urban areas will be closely related to social services modernization, while in rural areas and small towns the lack of funds and of professional staff will lead to a slow development of social infrastructure and services.

The realistic scenario for 2020 will assume a significant increase of accessibility in the Sub-region, but problems will occur due to increased transport costs for goods and passengers since the bridge between Calafat and Vidin will significantly reduce the traffic of goods and people in the Giurgiu-Russe region. Some projects will be delayed or even abandoned. Thus there may be delays in building the bridge Calarasi-Silistra, in making the highway around the Black Sea or in building the Danube-Bucharest channel. The project for Russe airport rehabilitation could be abandoned due to lack of profitability, but the planned private airport at Adunatii-Copaceni in Giurgiu county will be constructed. Another important issue is the quality of roads and railways on Pan-European corridor IX section Bucharest-Sofia-Russe which does not meet the European standards.

Share of villages with access to municipal infrastructure will increase significantly, but probably there will be delays in implementation of integrated waste management in certain areas of the region. Increasing natural gas prices will negatively influence the development of natural gas network in the region. AlSO the increasing price of electricity and delays in implementation of programs aiming the rehabilitation and cross-border cooperation in electricity, will make Bulgaria and Romania to be energy-intensive countries, with very high energy intensity values (4-5 times higher than developed countries like Germany, Austria, Italy).

Realistic scenario assumes a moderate and progressive development of GDP in RBB Sub-region with emphasis on developing small and medium enterprises, rapidly growing of service sector and increase of direct and indirect investments in high technology areas. Risks in achieving realistic scenario are related to the phenomenon of globalization, the risk of moving the location of industrial companies to locations with cheaper workforce and the competition in tourism and agriculture.





RMU Subregion

Analysis

Natural Conditions

The Subregion includes almost all land forms, from old mountains to the newly formed Danube Delta. The Danube flows into the Black Sea through its 3 arms: Chilia, Sulina and Sf.Gheorghe and enters in Moldova at the confluence with the Prut River, at 1 km from Giurgiulesti village (Cahul district). The Subregion has a rich hydrographic network, many lakes with rich flora and fauna (both aquatic and terrestrial), wild beaches towards the Black Sea coast.

Farmland occupies the highest share in the Subregion, more than 80%. What is characteristic is the high share of surface waters and ponds in some components (ex. in Tulcea county they cover more than 40%). The share of arable land in total farmland is more than 80% in each component.

The Danube Delta Biosphere Reserve is the largest protected natural area in the Subregion, having alSO a status of RAMSAR site and Natural and Cultural World Heritage Site. In Romanian and Moldavian parts of Subregion are 90 protected areas (covering 36.6% from its area), out of which 56 are in Romanian part. In Romanian part of subregion are also 42 NATURA2000 sites.

The Danube is the main water resource both for domestic and industrial needs, but alSO is the underground water, which has a better quality and is less expensive. Wastewater treatment plants are inefficient, so the pollutants are exceeding the limit of admissible values.

Settlement Structure

What is characteristic for this subregion is the big variety of nationalities living here: in Tulcea county, for example, are living about 17 nationalities and more than 30 in Ukrainean part.

Between 1991 and 2008 population decreased in Romanian part of subregion with 7.5%, but in Moldavian Danube Area the number of people in the past five years has not essentially changed, being registered positive dynamics.

In Romanian part of Subregion urbanization degree decreased in 2008 (57.5%) compared with 2001 (59.2%). Braila and Galati municipalities, county seats, are centers of national importance, with a potential European influence and functioning together as one urban system. They are important industrial, administrative and cultural centres, regional poles in the South-Eastern Romanian region. Tulcea municipality, county seat, is an important industrial, administrative and cultural center, considered to be of rank II as hierarchy.

In the future, Galati and Braila municipalities will be central part of the Metropolitan area “Dimitrie Cantemir” forming the second big agglomeration in Romania (about 1 million people), including a new international airport and a new bridge across the Danube in the area of Braila municipality.

The Southern part of Moldova is connecting river and sea ports from Romania and Ukraine (Braila, Galati, Reni, Izmail, Tulcea, Kilyia) with their neighboring cities in Moldova: Giurgiulesti, Cahul, Cantemir, Vulcanesti, Taraclia and Ceadir Lunga. They can be considered “growth poles”. Their advantages are: the Cahul airport, railways, highways, the custom Cahul-Oancea towards Romania, production of high quality wines. Each of those growth poles has certain advantages and problems created by the existing environment and future development. The policy, oriented to support urban growth poles towns, is more attractive to prospective business.

In the Subregion, Braila and Galati municipalities have universities, but most students are concentrated in Galati university center (almost 90%). In Cahul, Gagauzia and Taraclia are several educational institutes like vocational schools, colleges, universities.

The region is facing with decreasing of total active and occupied population, with repercussions upon the labor market.

Transport and Technical Infrastructure

The Romanian Sub-region is crossed by the Pan European Transport Corridor IX on a short section in the north, in Galati County, and by Corridor VII, the Danube River, in all three other counties. The National Spatial Plan - NSP – Ways of Communication section, referring to the Road network, specifies the construction of a new road bridge over the Danube River at Braila. The access to the Republic of Moldova is done by 2 border crossing points: Cahul and Giurgiulesti, the only river port of the Republic of Moldova, can be accessed from Galati municipality by road or railroad, on 14 km. Giurgiulesti is located at 2 km from the town of Reni, in Ukraine, the eastern extremity of the future Reni-Odessa highway.

Since presently most passengers and freight are transported by road, international roads are vital for Moldova-'s integration into the regional economy. Through NUTS4 Cantemir pass one European way across Moldovan region the Danube - E577: Poltava-Kirovograd-Goianul Nou-Chisinau-vama Giurgiulesti-Galati-Slobodzia.

The waterway network in Romanian part of subregion includes river-sea ports (Braila, Galati, Isaccea, Tulcea, Sulina) but alSO smaller river and inland ports. Transport network in NUTS4 Cahul include all types of communication lines: the Giurgiulesti port, the rail line Cahul – Giurgiulesti, the International airport Cahul, the national roadway Chisinau-Cahul-Giurgiulesti.

By the Giurgiulesti Port, Moldova has direct exit to the maritime sector of the Danube, which allows future development of international shipping. In the perspective development of the activity of Giurgiulesti International Free Port and of the investments of national and foreign economic agents, the flow of transported goods will increase. The port of Giurgiulesti is the only multimodal node in Moldova.

AlSO in Ukraine, the most important role in industry is played by the transport sector. Its main enterprise is the Reni port, located on the left bank of the Danube River. Today Reni sea port is a powerful transportation hub in Ukraine for sea, river, rail and road transport.

The energy sector is a sector with great dependency on external factors and one of the most vulnerable economic sectors of Moldova, due to its dependence on foreign electricity and gas.

The area has an important potential of renewable energy sources including solar energy, wind energy and the biomass energy. The wind power potential of the subregion is high, the wind power starting to be produced by an important number of private investors.

Braila, Galati and Tulcea municipalities have no water treatment plants, wastewater being discharged directly into the Danube. Existing data shows that waste water exceed the values of legal indicators. Most of existent pre-treatment plants are not in operation. The groundwater in the Prut and Danube hydrographic basins is exposed to high risk of pollution. The industrial pollution of surface water is critical in some areas (ex. Galati port and shipyard), the risk of underground water pollution being significant.

Economy

In the Subregion in 2008 the GDP indicator in purchasing power parity had values from 7.86 in Reni district to 38.4 in Braila county. A positive trend was registered in all subregion's districts.

The Subregion can attract investors due to its wind and tourist potential and to its fertile soils for agriculture.

Industry and services are concentrated in main urban centers – Braila, Galati and Tulcea municipalities, with traditional units such as metallurgy, off-shore drilling, textile and food industries. The location on the Danube of Galati municipality determines the development of the economy around the shipyard, the river port, the iron and steel factory and the ore carrier port in Galati municipality. Here is located one of the 6 free zones in Romania (Galati Free Zone), in the vicinity of Galati municipality, on the Danube bank and close to the Ukrainian and Moldavian borders. Cahul is developing the processing of agricultural products, light industry and construction industry. In Cantemir operates 7 wine factories, the city being known for the production of canned, dried fruits. In Taraclia activate two free economic zones and in Gagauzia the industrial production is dominated by wine by nearly 60%.

The main feature of economic-geographical location of Ukrainean area of the Subregion is that it is located by the river and it has a border position. The industry of the Kilyia district is represented by enterprises engaged in shipbuilding and ship repair, processing of agricultural products, and production of other industrial products. Intensification of the development of tourism industry is one of the priorities of the district.

Flora and fauna of the Danube Delta, recreation and health resources of the Black Sea, spa resources, historical monuments, hunting and fishing funds, protected areas and natural monuments, all these create conditions for development in the different types of tourism: ecological, agricultural, historical, recreational and others. Interesting tourist routes are developed in the area of Danube Biosphere Reserve. Rural (green) tourism is actively developing. This is why a part of this Subregion is by excellence a tourism area.

Documents

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National Development Plan 2007-2013

The global objective targets the rapid reduction of the social and economic development disparities between Romania and EU member states. It is aiming a competitive, dynamic and prosperous Romania.

National Development Strategy of Moldova 2012-2020

It specifies the priorities for boosting the economic development and the need to reduce the various risks and potential barriers to the economic factors, by creating clear rules for business development.

National Spatial Plan of Moldova (2008-2025)

Its main directions consists of the continuous modernization of transport systems, social infrastructure and technical infrastructure, improving the production and agro-industrial system, increasing the ecological comfort, protection of historical and cultural heritage, development of tourism.

European Spatial Development Perspective

General objective of the document is achieving the balanced and sustainable development of the territory of the EU:

- economic and social cohesion
- conservation and management of natural resources and the cultural heritage
- a more balanced competitiveness of the European territory.

External factors – measures in RMU ARGE Subregion

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- to strength and develop the interregional connection
- to enhance the natural and cultural heritage
- to increase economic competitiveness and to develop the knowledge-based economy
- to develop and modernize the transport infrastructure
- to protect and improve the quality of the environment
- the human resources development, promoting employment and social inclusion and strengthening the administrative capacity
- to develop the rural economy and to increase productivity in the agricultural sector
- to reduce the development disparities between the regions.
- to secure spatial cohesion at regional, trans-regional and inter-regional level
- integration of sectoral and spatial development plans on medium and long terms
- acceleration of urbanization and modernization of rural areas
- development of the legislative, institutional and technical framework, in order to support Romania's spatial planning at EU level;
- ensuring cooperation and participation in spatial planning and cohesion

SWOT Analysis

STRENGTHS

- diverse and rich biodiversity
- professional and labor skills in the field of maritime economy, steel industry, fishery, agriculture, wineries, rice production and light industry
- strategic transport location, access to the Black Sea, ports of international importance
- classic and un-conventional sources of electric energy production (especially wind)
- flexible, qualified, specialized, available and cheap labor force
- free trade areas

WEAKNESSES

- extreme climatic phenomena (floods, landslides etc.)
- high rate of settlements with less than 2,000 inhabitants (a vast rural territory)
- low accessibility in some areas, including the settlements from the Danube Delta
- localities without water supply, sewerage and water treatment stations
- low population income, the subregion has the lowest GDP in the whole DR+ area
- underground economy

OPPORTUNITIES

- valorizing the natural richness, high potential for tourism development, using the natural, cultural, historical and archaeological heritage
- high potential for the sea and river transport development
- projects for the construction of new airports and Danube bridges
- possibilities to extend the inexpensive electric and thermal energy from unconventional sources (wind, solar, biomass) and to attract massive investments in renewable energy

- supporting and promoting the fishy potential and the wine farms

THREATS

- un-controlled tourism and poaching
- migration of young specialists towards more developed regions and abroad
- risk of isolation towards the major transport terrestrial arteries (lack of highways, express roads, Danube bridges)
- high water pollution risk (the wastewater is flowing directly into the Danube)
- economic crises which increases the poverty and is emphasizing the development of black and grey economy

Scenarios

Optimistic

The major urban agglomerations will be developing, using their favorable positioning on the Danube River and their link with the Black Sea. Galati and Braila municipalities, urban development poles, will create in the next years the Cantemir metropolitan area. AlSO in Moldavian part there will be developed the smaller settlement agglomerations. There will be an improvement of the living conditions by applying the programs regarding the public dwellings' heating rehabilitation or the incentive programs to increase the housing stock, especially for young persons, with private and national funds.

One of the region's potential is represented by its high education institutes. The human resource potential of the sub-region will be used, especially its (relatively) high qualification of workforce. The specific professional skills of population and (relatively) cheap workforce will be used in the development of marine economy, fishing, wineries, rice and vegetable production.

The main advantage of the region is represented by its high potential for the river transport development and by its ports (Tulcea, Sulina, Reni, Giurgiulesti) that allow in the future the traffic of goods to be switched from road to fluvial transport. Developing the Danube ports (ex. development of ship construction in the Kilia dockyard, or development of the Izmail shipyard) and implementing the EU's Danube Strategy will increase the economic development of this sub-region. Presence of free zones (ex. the Free International Port Giurgiulesti) will increase the number of foreign investments.

The deep navigating canal Danube-Black Sea (via Bystre channel) will be available and due to the increased interest and funding for programs related to the Danube tourism development, new touristic mini-ports and cruises will be developed. Logistic centers or combined transport terminals will be created, as well as new ferry connections. The infrastructure for a new border crossing point Isaccea (Romania)-Orlovca (Ukraine) will be achieved.

The transport infrastructure of the sub-region will be improved by materializing projects such as constructing a bridge on the Danube linking Braila and Galati counties with Tulcea county or the creation of the marine port in Kilia district. The airports in the region (Tulcea, Cahul) will be modernized and a new airport in Braila-Galati metropolitan area that will include alSO a highway will be constructed. Local roads and railroads will be modernized (including the railway connection Odessa-Izmail) or built (railway Izmail-Reni). The railways of national and regional importance located in Moldavian Danube Area will give an impulse in its economic development.

The wastewater treatment stations will be modernized and new water treatment stations will be built. Not only the gas network will be extended, but alSO the inexpensive electric and thermal energy coming from unconventional renewable sources (wind, solar, biomass), especially in Dobrogea region and in Southern region of Moldova, attracting massive investments in valorizing renewable energy and to support wine-growing farms by new technologies and brands promoting.

Since the natural offer of the region is stimulating the development of agriculture as basic economic function, the concentration of agricultural terrains, implementation of modern technologies and the use of irrigation systems will increase the agricultural productivity. The high fishy potential will lead to the development of the aquaculture, but alSO the organic farming will be enlarged, and in some parts of the region (ex. Kiliia and Izmail districts) will be expanded the vegetable processing and wine industries. In some regions (Reni district) sheep breeding and further wool and leather processing industry will be enlarged. Local, traditional food products will be promoted by the development of small scale business in the field of animal processing, creation of processing industry centers for production of final agricultural products.

The extension of protected areas together with a sustainable valorization of the valuable natural ecosystems and unexploited natural areas will represent the premises for a green tourism in the area and for establishing a tri-lateral (RO-UA-MD) Biosphere Reserve. Exploiting the very important touristic potential of the region and attracting the important international tourism operators the tourism on the Danube will be developing. Using the European funds from the Program Romania-Moldova-Ukraine, the economic development of the RMU Sub-region will be emphasized.

Pessimistic

In this scenario, the soil and coastal area erosion will aggravate. The natural risks (acid rains affecting forests, floods, seismic risk, landslides, the "deserted land" phenomena, siltation and degradation of the arms of the Danube) will increase without taking the necessary prevention measures. Men-made accidents will occur: accidents at ports, oil terminals and water transport, accidental pollutions. The uncontrolled development of economic environment will have negative impact upon the natural environment, like extension of the naval traffic in Danube Delta, poaching and excessive fishing, overexploitation of living natural resources, habitats reduction and fragmentation due to urbanization processes together with dropping of green spaces in urban areas. Due to economic activities and industrial fishing, the Black Sea ecosystems will progressive damage, endangering maritime flora and fauna species.

The lack of funds for the improvement of social conditions will lead to the deterioration of social and public infrastructure. There will be a decreasing of population number, depopulation of settlements, population ageing and a high rate of settlements having less than 2000 inhabitants.

The low labor motivation, decline in specific labor skills, long-time unemployment will increase the migration of qualified labor force and of young people towards developed countries. The poverty will increase.

If there will be insufficient financial sources for transport and technical infrastructure development, and an insufficient absorption of EU funds, the risk of isolation towards the major transport terrestrial arteries will grow, due to the lack of Danube bridges, highways, express roads.

The peripheral location of the sub-region, its transport and communication isolation due to poor development of regional and national transport network (like in Reni or Kiliia districts), lack of Pan-European corridors and TEN-T roads passing through the part of Moldavian Danube Area territory will decelerate the economic development of RMU sub-region.

It will continue the deterioration of the traffic on Sulina channel due to the alluvium deposits and bank degradation, as well as the decline of transit cargo flows through the Ukrainian Danube Region, emphasizing the unstable operation of the deep navigating canal Danube-Black Sea (via Bystre channel).

Financial funds for the improvement of the electric energy and gas networks will be insufficient, affecting especially the Moldavian Danube Area, since here, the energy sector has great dependency on external factors.

The long economic crises will affect the living standards (GDP/inhabitant), increasing the poverty in the region and the development of black and gray economy.

The region will continue to face with a low agricultural productivity and an ineffective agriculture. The soil contamination and degradation in Ukrainian part of the region will accentuate. It will continue the low motivation for building-up effectiveness of land use for private land owners in Kilia and Reni districts.

Globalization together with the dis-industrialisation process will lead to the disappearing of some traditional sectors (textile and light industries, manufacturing). Some parts of the sub-region will know the same dependence on external markets since a poor development of their internal markets will occur.

The region will have a descendant trend of foreign investments and of number of foreign companies due to low investments and postponing new technologies achievement, due to the increasing of the un-loyal concurrence and to a high level of corruption. The poor quality of tourism services and to the degradation of social infrastructure will be constraints for an effective tourism development. Thus, tourism attractions will not attract significant external investments.

Realistic

In the realistic scenario, the natural or men-made risks will be diminished by applying several preventing measures, but most of them will still occur. The quality of water bodies will not be significantly improved and due to climate change there will be some changes in water management. The Danube Delta and the Black Sea will be still affected by economic activities and industrial fishing, by the naval traffic, poaching and excessive fishing. However, the tourism will continue to develop here, valorizing the new unexploited areas. New protected areas will be declared in some parts of the sub-region, especially where they are not yet officially recognized (ex. In Ukrainian part) and the management of existing protected areas will be improved. Tourism will continue to endanger these areas.

In the realistic scenario, the expansion of built-up areas and loss of agricultural land will be balanced. Due to the natural offer, the agriculture will continue to be the basic economic function of the region, with a better productivity based on new technologies and using the irrigation systems. Fishing and aquaculture will have an ascendant trend, as well as the ecological agriculture. Organic products will be obtained and the existent renewable energetic resources will be more and more valorized (the natural biomass and agricultural waste, solar and wind energy).

There will be a gradual decrease of emissions, due to legislative measures and the obsolete industrial technologies will be upgraded. The waste production will be kept at its present level, waste management will be improved, the un-conform landfills will be closed and replaced with new ecological waste dumps. Selective waste disposal and waste recovery will take place in few localities.

The urban system Galati-Braila will represent a development pole, but the Cantemir metropolitan area is possible not to be created. In Moldova the development will occur around the 3 major agglomerations from the Danube area, but the number of settlements with less than 2000 inhabitants will not decrease. The number of population will continue to decrease. The poverty will persist for a certain range of disadvantaged groups.

Realistic scenario operates with the assumption that all transport networks will be constructed in line with proposed planning; however, not all transport-related constructions will be accomplished to the full extent, as originally conceived within the 2030 time horizon. The high potential for the river transport development will be used and projects aiming the improvement of transport accessibili-

ty will be in course. Railway network is assumed to undergo only a reconstruction of its currently present lines.

The gas network will be improved, but it will not have a very large extension, especially in rural areas. Since the region has an important potential of renewable sources, the energy coming from these sources will have a larger extent, especially in Dobrogea region and in Southern region of Moldova.

Economic potential of RMU sub-region will continue to be concentrated in its centers. The economic crises will affect the living standards (GDP/inhabitant), which will increase with only about 25% in the region. The black and gray economy will not disappear.

The presence of ports and free zones will enhance the economic development of the region in all its components and the number of foreign investments will increase.

The unemployment rate will be stagnant or even will have an ascendant trend (until 25%), but the migration of qualified labor force in developed countries will continue, as well as the illegal cross-border flows of goods.

The touristic potential of the region will be exploited and the bio-diversity valorized, but important tourist operators will be still not very involved in developing the tourism on the Danube and the tourism attractions will not attract significant external investments. The poor quality of services and the low social infrastructure will remain a constraint for an effective tourism development.

Conclusions and recommendations

Conclusions

General

The second step of the Spatial Planning Working Group ARGE DONAU concept Donauregionen has been done - Donauregionen+

The original long term objective of Donauregionen program is shifting from the description of the potential of the middle and lower Danube and its importance for the Europe as important development corridor to the development of permanent, flexible planning information system within the Danube area supporting the monitoring and evaluation of the sustainable development of settlement structures along the Danube.

Specific objective of the project – the mapping of the existing development strategies in ARGE Region (AR) consisting of 48 Danube Regions was achieved at 3 levels:

1. Danube Regions (DR) – previously NUTS 3 (except involved regions in Moldavia and Ukraine) regions situated just on the Danube
2. Cross Danube Regions (CDR) – clusters of Danube regions with developed, developing or potentially developing cross-danube polycentric systems promoting a balanced pattern of attractive and accessible growth areas
3. ARGE DONAU Subregions (ADS) – groups of danube regions consisting of Danube metropolitan areas and relevant regional systems of settlements.

Project results are as follows:

1. The donauregionen team was enlarged with new partners from Croatia, Moldavia and Ukraine and is ready to continue in further project development – the new proposal (POLYREG to D++) has been submitted for the 4th call of SEE program
2. The planning server was developed and is available via internet for planners, Danube regions planning administrations, investors and public.
3. The set of descriptions, comparative analysis of selecte indicators, SWOTs, Strategies at all 3 levels of D+ project are available for the endusers
4. Developed software represents the tool which with slight modification could be modified and apply at the national, regional as well as local levels in D+ project involved coutries

D+Webportal

The main output of the D+ project is the D+WEB Server and D+GIS Server, which together represents the 1st step of the Danube Spatial Planning Information System (DANIS). The system structure follows the logic of Spatial Decision Support System, an integration of:

1. A database management system – This system holds and handles the geographical data. A standalone system for this is called a geographical information system, (GIS) – D+ project use ARCGIS technology for D+ GIS Server;
2. A library of potential models that can be used to forecast the possible outcomes of decisions – D+ project uses MS SQL Server technology for WEB Server applications development (comparative analysis and simulation modeling of 27 indicators in the time period from 1996 till 2020 in (a) 48 Danube Degions, (b) 18 Cross Danube Regions and (c) 5 ARGE Subregions of Slovakia, Hungary, Croatia, Serbia, Romania, Bulgaria, Moldavia and Ukraine).
3. An interface to aid the users interaction with the computer system and to assist in analysis of outcomes – D+ project developed an user interface , where D+GIS server use ARCGIS Server, which enables to the internet user the on/off switch of individual layers project and GIS server is fully interactive, the level of interactivity of specific user is based on its rights defined by administator.

An analysis done of the WP4 shows the most developed regions are around Danube metropolitan areas, as well as the fact the middle Danube has bigger potential for the lower Danube.

Analysis of Danube regions development status of the time period from 1996 to 2008

Objective

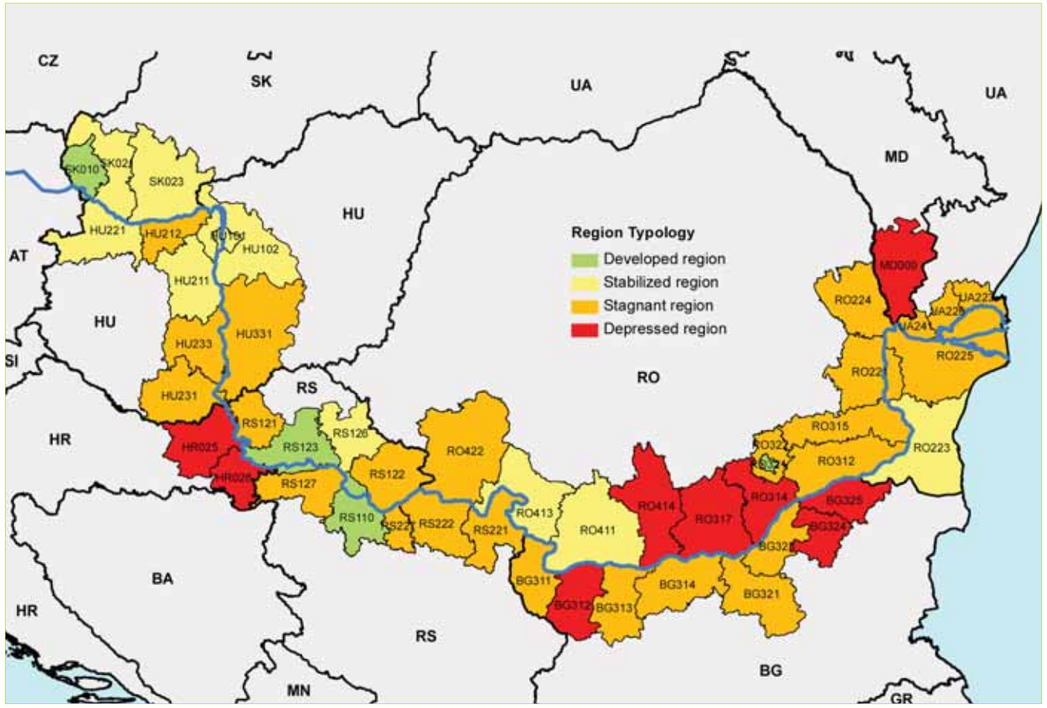
The database created in previous project Donauregionen was updated and further developed. The new Danube regions from Croatia , Moldavia and Ukraine were added to existing ones from Slovakia, Hungary, Serbia, Romania and Bulgaria. In contrary to the Donauregionen project. the data of specific indicators were collected in 4 time cuts, specifically 1996, 2001, 2005 and 2008.

Methodology

The 1st step was the specification of indicators, most of them have been taken from the Donauregionen project. Then the forms of WEB server were developed and individual partners fill in the specific texts and values of indicators. On the basis of collected data the disparities has been identified and typology of regions has been done.

Outputs

The outputs of WP4 you can find at project servers as a set of forms where all the collected data of Danube regions indicators are available, as well as the specification of their disparities and typology.



Comprehensive evaluation and Typology of regions – 2008

As an example the Danube regions typology for the final year of analyze a period of time is presented (map and the values)

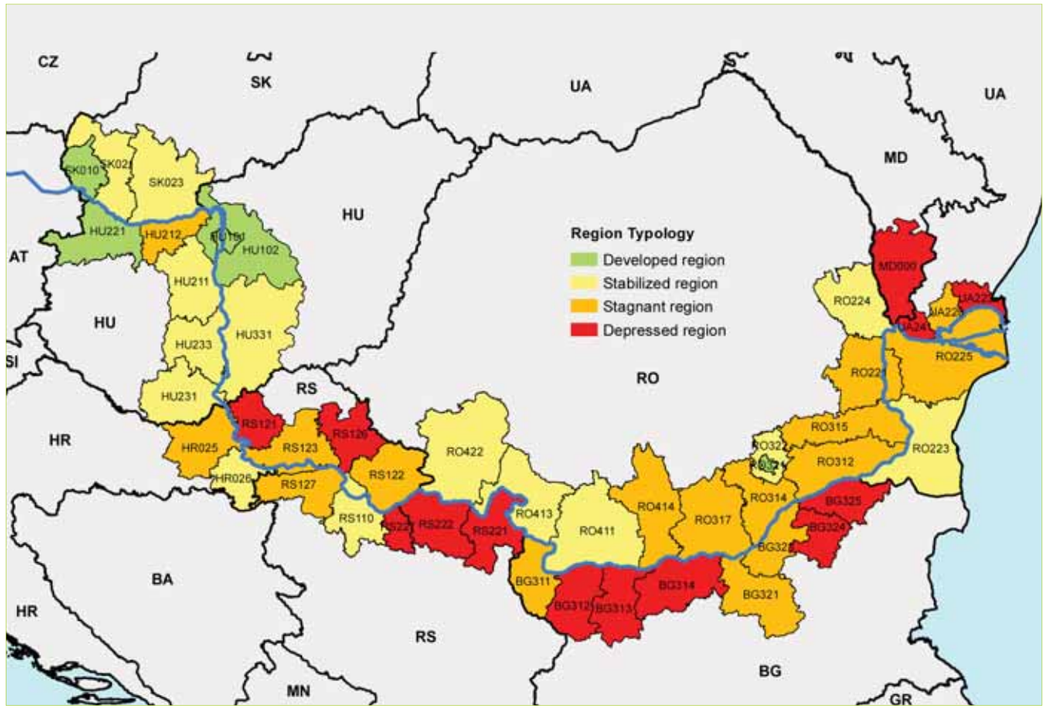
The table represents the final values for specific general schemes, specifically:

- GS Natural Conditions
- GS Settlement Infrastructure and Human Resources
- GS Transport and Technical Infrastructure
- GS Economy

Each value represents the sum of the values of its indicators. The real values of individual indicators has been converted into interval (-3;+3), where -3 represents the region with the worst value, +3 with the best value and the rest of the Danube regions have the proportional value within the interval. This enables to sum the values of individual indicators in specific regions. The values of specific general schemes in Danube regions are presented in the table below as well as the total value, representing the sum of the general schemes values. From this total value the typology of Danube regions is derived as follows:

- A - Developed regions
- B - Stabilized regions
- C - Stagnant regions
- D - Depressed regions

State	NUTS3	Region	NC	SSHR	TTI	E	Total	Typology
Slovakia	SK010	Bratislavský kraj	-1,10	2,60	3,00	3,00	3,00	A
Slovakia	SK021	Trnavský kraj	-1,41	1,20	1,47	0,77	1,02	B
Slovakia	SK023	Nitriansky kraj	-1,03	1,02	0,60	0,28	0,63	B
Hungary	HU101	Budapest főváros	-1,89	0,29	2,98	2,28	1,48	B
Hungary	HU102	Pest megye	0,32	0,78	1,10	-0,53	0,76	B
Hungary	HU211	Fejér megye	0,10	-0,08	0,87	-0,86	0,12	B
Hungary	HU212	Komárom-Esztergom megye	-1,01	-0,14	0,34	-0,70	-0,32	C
Hungary	HU221	Győr-Moson-Sopron megye	-1,34	-0,04	0,90	-0,08	0,02	B
Hungary	HU231	Baranya megye	-1,85	-0,07	-0,73	-0,77	-0,86	C
Hungary	HU233	Tolna megye	-1,29	-0,07	-0,02	-1,34	-0,72	C
Hungary	HU331	Bács-Kiskun megye	-1,68	0,21	-0,37	-1,24	-0,77	C
Croatia	HR025	Osječko-baranjska županija	-1,07	-0,27	n/a	-3,00	-2,14	D
Croatia	HR026	Vukovarsko-srijemska županija	-0,51	n/a	n/a	n/a	-2,16	D
Serbia	RS110	Beogradska oblast	n/a	0,94	0,29	0,64	1,80	A
Serbia	RS121	Zapadnobačka oblast	n/a	-0,02	-0,16	-2,15	-0,38	C
Serbia	RS122	Južnobanatska oblast	n/a	0,38	-0,01	-2,12	-0,07	C
Serbia	RS123	Južnobačka oblast	n/a	1,40	0,31	-0,37	1,54	A
Serbia	RS126	Srednjobanatska oblast	n/a	0,42	0,52	-2,26	0,07	B
Serbia	RS127	Sremska oblast	n/a	0,04	-0,14	-2,27	-0,39	C
Serbia	RS221	Borska oblast	n/a	0,50	-1,58	-2,33	-0,67	C
Serbia	RS222	Braničevska oblast	n/a	0,09	-1,73	-2,16	-0,87	C
Serbia	RS227	Podunavska oblast	n/a	0,14	-0,67	-2,23	-0,50	C
Romania	RO221	Judetul Braila	-0,80	-0,07	-1,01	-1,64	-0,95	C
Romania	RO223	Judetul Constanta	-0,72	1,51	2,42	-0,12	1,26	B
Romania	RO224	Judetul Galati	-0,21	1,03	-1,23	-1,80	-0,42	C
Romania	RO225	Judetul Tulcea	-1,04	0,61	-1,04	-1,80	-0,80	C
Romania	RO312	Judetul Calarasi	-0,80	0,17	-1,36	-2,22	-1,17	C
Romania	RO314	Judetul Giurgiu	-1,78	-0,09	-1,50	-2,33	-1,66	D
Romania	RO315	Judetul Ialomita	-0,86	0,30	-1,02	-1,98	-0,95	C
Romania	RO317	Judetul Teleorman	-1,35	-0,37	-1,58	-2,02	-1,55	D
Romania	RO321	Municipiul Bucuresti	-1,01	3,00	1,73	1,60	2,31	A
Romania	RO322	Judetul Ilfov	-1,52	0,44	-0,66	-0,16	-0,28	C
Romania	RO411	Judetul Dolj	2,43	0,79	-0,49	-1,52	0,59	B
Romania	RO413	Judetul Mehedinti	3,00	0,64	-0,78	-1,88	0,47	B
Romania	RO414	Judetul Olt	-2,08	0,14	-1,49	-1,98	-1,51	D
Romania	RO422	Judetul Caras-Severin	-1,01	0,61	-0,89	-1,70	-0,71	C
Bulgaria	BG311	Vidin	-0,35	0,93	-2,29	-1,47	-0,66	C
Bulgaria	BG312	Montana	-2,96	0,89	-2,53	-1,53	-1,56	D
Bulgaria	BG313	Vratsa	-2,66	1,00	-2,05	-1,51	-1,28	C
Bulgaria	BG314	Pleven	-1,69	0,38	-1,17	-1,45	-1,00	C
Bulgaria	BG321	Veliko Tarnovo	0,03	1,68	-2,35	-1,35	-0,19	C
Bulgaria	BG323	Ruse	-1,14	0,81	-0,76	-1,21	-0,44	C
Bulgaria	BG324	Razgrad	-2,92	1,00	-2,44	-1,88	-1,61	D
Bulgaria	BG325	Silistra	-3,00	0,33	-1,57	-1,64	-1,60	D
Ukraine	UA220	Izmail‘s‘kyi rayon	0,53	0,47	-0,87	-1,44	-0,20	C
Ukraine	UA223	Kiliis‘kyi rayon	-1,91	0,04	-2,65	0,09	-1,00	C
Ukraine	UA241	Reniis‘kyi rayon	-0,79	-0,17	-1,53	-1,53	-1,09	C
Moldova	MD000	Moldova Danube Area	-2,16	-3,00	-3,00	-1,25	-3,00	D



Predicted status of Danube regions of 2020

Objective

During the previous project Donauregionen the ARGE DONAU Sub-regions (ADSs) has been identified by experts from partner countries. ADS represents the groups of Danube regions having some specific geographic (natural, settlement, transport, infrastructure and economic) features. The objective of WP7 is to characterize them as concerns their development scenarios.

Methodology

WP 7 represents the integration of bottom-up approach, where the strategy is derived from the Danube regions strategies and the top-down approach, where the planning issues relevant to the Danube regions development, from various national, trans-national and European planning documents and activities have been mapped.

Bottom up approach was based on the outputs of WP5, where on the basis of identification of existing and potential measures, the simulation of the development of the settlement potential for the 2020 was simulated and the strategy of individual Danube regions were mapped.

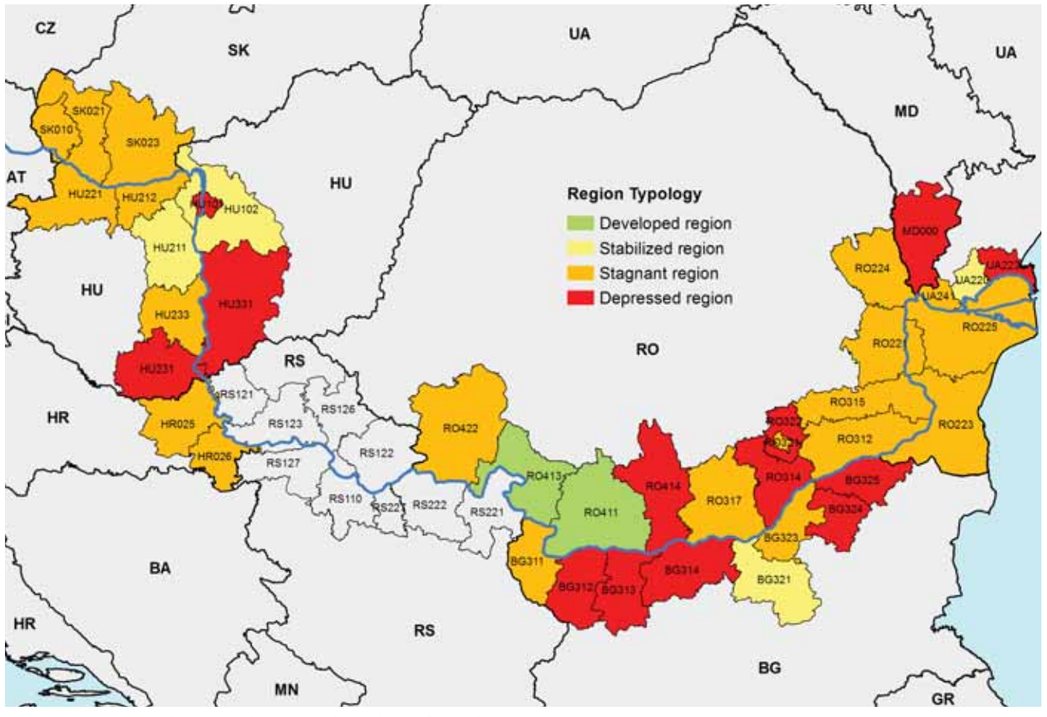
As concerns the top-down approach each country has elaborated for each its ADS special background report, where the relevant planning documents and SO called along Danube measures, serving as external factors of the Danube regions development, have been identified.

Integration of these two approaches, when the impact of external factors has been added to the results of WP7 is visible on following map and table, where the situation of the Danube regions in 2020 is presented (for detailed information of the table see the description in WP4). On this base the scenarios of ADSs has been developed.

Output example

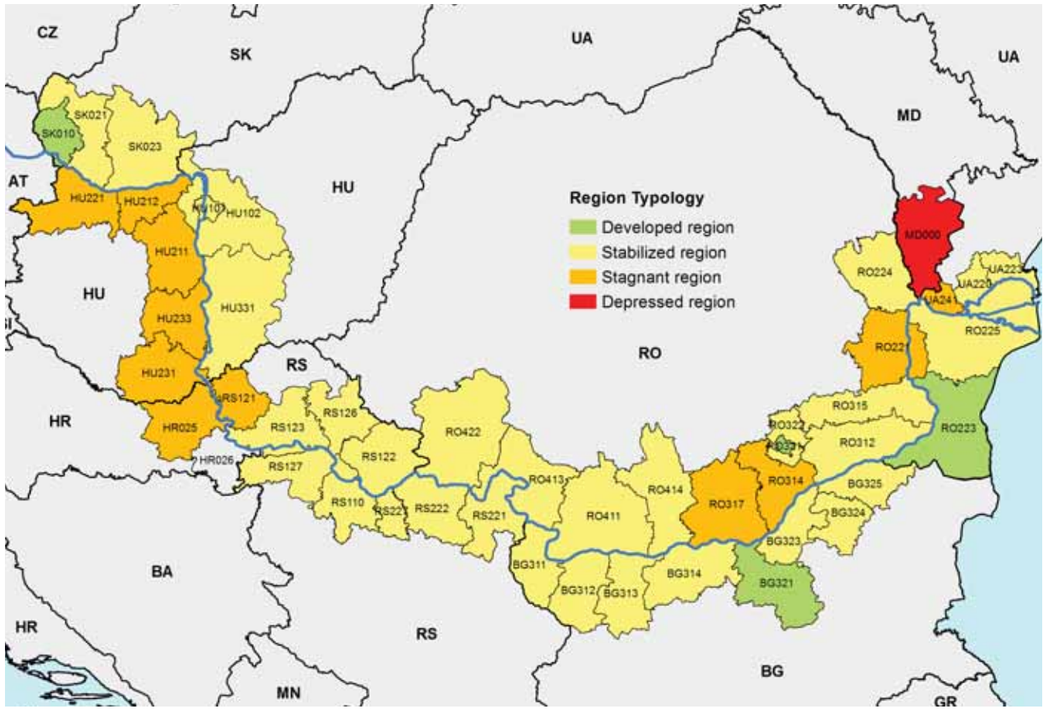
For each ADS the 3 scenarios has been elaborated (optimistic, realistic and pessimistic). The typology of the Danube regions based on the evaluation of the predicted 2020 values (realistic) of the indicators are attached.

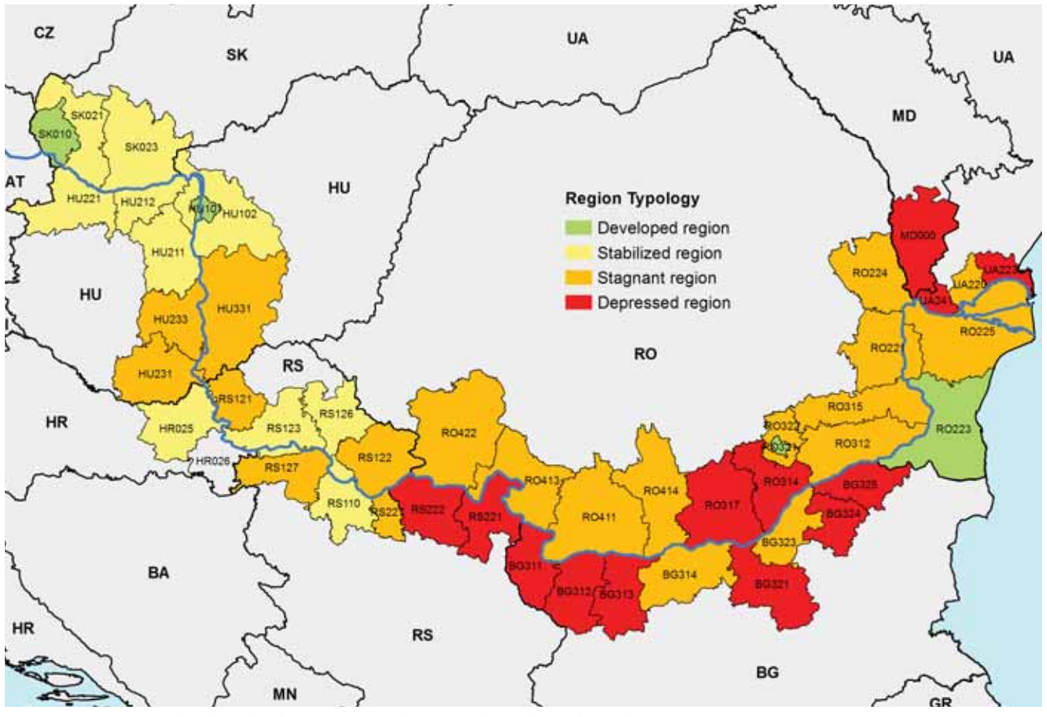
State	NUTS3	Region	NC	SSHR	TTI	E	Total	Typology
Slovakia	SK010	Bratislavský kraj	-1,37	2,30	1,58	1,26	2,05	A
Slovakia	SK021	Trnavský kraj	-1,22	0,81	1,21	-0,15	0,55	B
Slovakia	SK023	Nitriansky kraj	-0,62	0,46	0,74	-0,59	0,17	B
Hungary	HU101	Budapest főváros	0,09	1,42	2,00	3,00	3,00	A
Hungary	HU102	Pest megye	1,04	1,00	2,02	0,28	1,74	A
Hungary	HU211	Fejér megye	-1,30	0,22	3,00	0,47	1,15	B
Hungary	HU212	Komárom-Esztergom megye	-2,38	-0,01	0,86	0,18	-0,12	C
Hungary	HU221	Győr-Moson-Sopron megye	3,00	0,77	1,24	0,89	2,18	A
Hungary	HU231	Baranya megye	-1,96	0,86	0,83	0,74	0,68	B
Hungary	HU233	Tolna megye	-1,14	0,35	0,82	0,53	0,55	B
Hungary	HU331	Bács-Kiskun megye	-1,10	0,72	0,83	0,44	0,70	B
Croatia	HR025	Osječko-baranjska županija	0,45	-0,49	0,88	-2,21	-0,75	C
Croatia	HR026	Vukovarsko-srijemska županija	1,58	n/a	n/a	n/a	0,35	B
Serbia	RS110	Beogradska oblast	n/a	0,41	n/a	n/a	1,48	B
Serbia	RS121	Zapadnobačka oblast	n/a	-0,49	n/a	-2,96	-2,37	D
Serbia	RS122	Južnobanatska oblast	n/a	n/a	n/a	n/a	n/a	C
Serbia	RS123	Južnobačka oblast	n/a	0,83	n/a	-1,91	-0,06	C
Serbia	RS126	Srednjobanatska oblast	n/a	-0,08	n/a	-3,00	-2,02	D
Serbia	RS127	Sremska oblast	n/a	n/a	n/a	n/a	n/a	C
Serbia	RS221	Borska oblast	n/a	0,00	n/a	-2,83	-1,77	D
Serbia	RS222	Braničevska oblast	n/a	-0,39	n/a	-2,38	-1,71	D
Serbia	RS227	Podunavska oblast	n/a	-0,34	n/a	-2,60	-1,88	D
Romania	RO221	Judetul Braila	-1,08	-0,24	0,45	-1,18	-0,68	C
Romania	RO223	Judetul Constanta	-0,70	1,39	2,57	-0,57	1,23	B
Romania	RO224	Judetul Galati	-0,31	0,82	0,44	-1,22	0,02	B
Romania	RO225	Judetul Tulcea	-1,46	0,54	0,78	-1,33	-0,37	C
Romania	RO312	Judetul Calarasi	-0,07	-0,06	-0,03	-1,50	-0,64	C
Romania	RO314	Judetul Giurgiu	-1,72	-0,32	0,14	-1,63	-1,22	C
Romania	RO315	Judetul Ialomita	-0,60	0,04	0,53	-1,44	-0,52	C
Romania	RO317	Judetul Teleorman	-1,29	-0,49	0,20	-1,33	-1,02	C
Romania	RO321	Municipiul Bucuresti	-0,78	3,00	2,15	0,80	2,52	A
Romania	RO322	Judetul Ilfov	-1,10	0,36	0,97	-0,54	0,09	B
Romania	RO411	Judetul Dolj	2,51	0,58	0,46	-1,12	0,71	B
Romania	RO413	Judetul Mehedinti	1,84	0,35	0,12	-1,36	0,19	B
Romania	RO414	Judetul Olt	-1,87	-0,14	-0,08	-1,34	-1,11	C
Romania	RO422	Judetul Caras-Severin	0,23	0,24	0,69	-1,12	0,01	B
Bulgaria	BG311	Vidin	-0,68	0,72	-1,92	-2,03	-1,32	C
Bulgaria	BG312	Montana	-2,96	0,59	-1,69	-2,05	-1,94	D
Bulgaria	BG313	Vratsa	-2,65	0,79	-1,33	-2,04	-1,62	D
Bulgaria	BG314	Pleven	-2,58	0,20	-1,45	-1,94	-1,89	D
Bulgaria	BG321	Veliko Tarnovo	-1,67	1,45	-1,87	-1,84	-1,12	C
Bulgaria	BG323	Ruse	-0,98	0,61	-1,15	-1,82	-1,10	C
Bulgaria	BG324	Razgrad	-2,77	0,69	-1,84	-2,26	-1,99	D
Bulgaria	BG325	Silistra	-3,00	0,07	-1,35	-2,15	-2,13	D
Ukraine	UA220	Izmail's'kyi rayon	2,09	-0,02	-1,54	-1,54	-0,57	C
Ukraine	UA223	Kiliis'kyi rayon	-1,56	-0,43	-3,00	-0,30	-1,65	D
Ukraine	UA241	Reniis'kyi rayon	0,18	-0,62	-2,22	-1,64	-1,66	D
Moldova	MD000	Moldova Danube Area	-1,52	-3,00	-1,38	-1,65	-3,00	D



Map 56: Natural Conditions Evaluation and Typology of Danube Regions - Year 2008

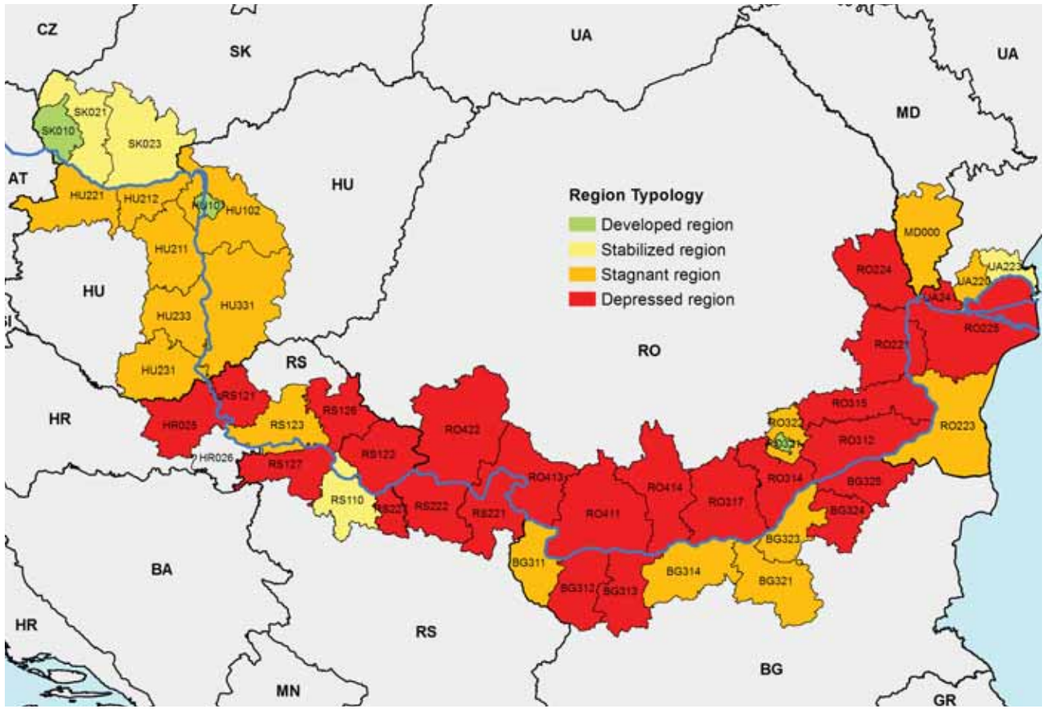
Map 57: Human Resources and Settlement Structure Evaluation and Typology of Danube Regions - Year 2008

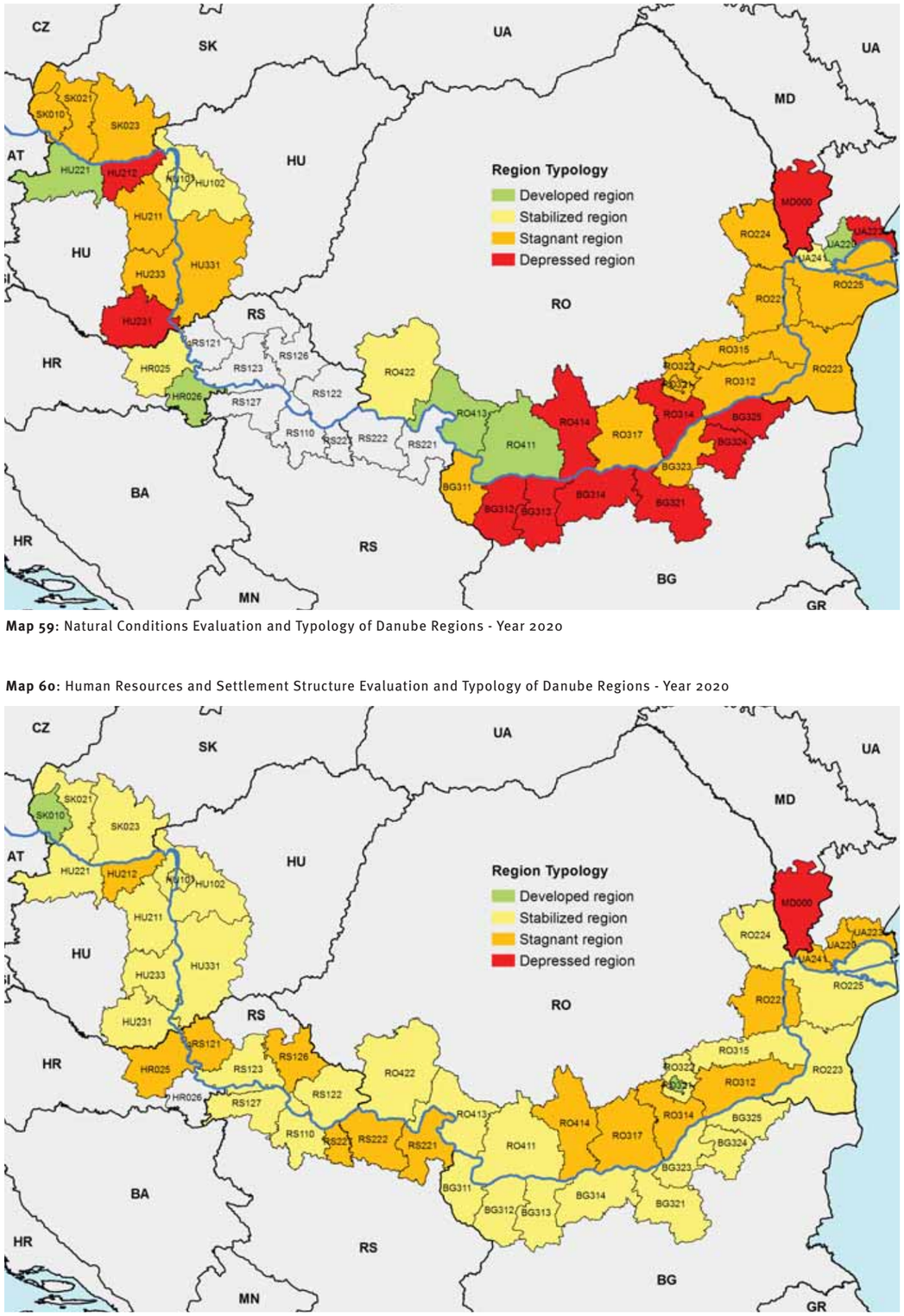




Map 58: Transport and Technical Infrastructure Evaluation and Typology of Danube Regions - Year 2008

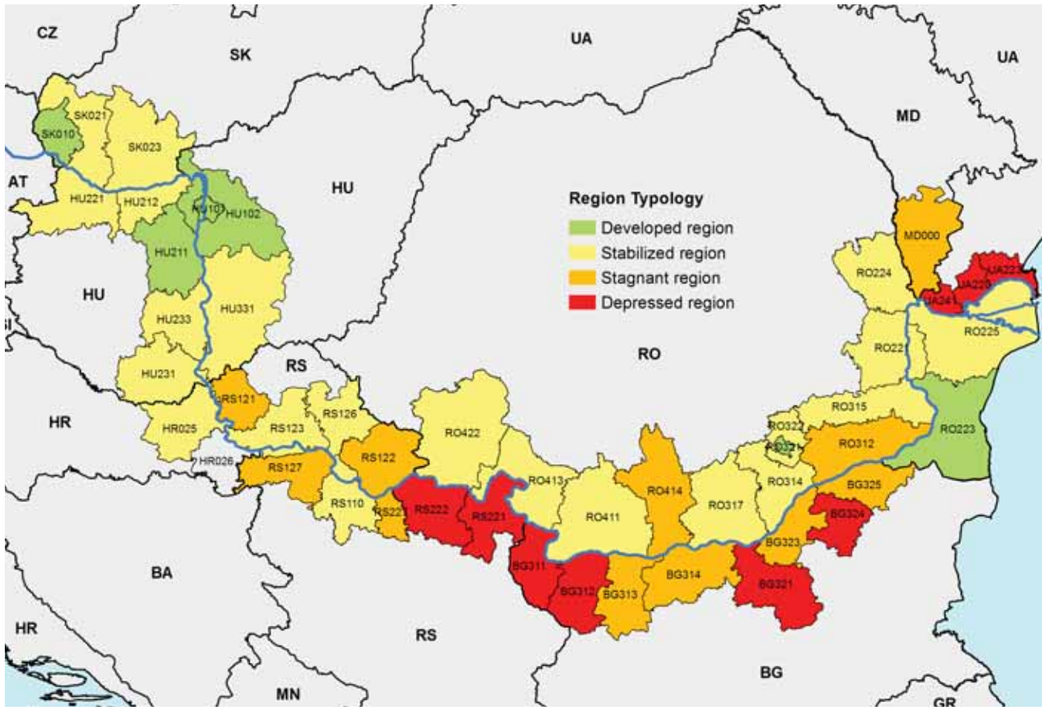
Map 59: Economy Evaluation and Typology of Danube Regions - Year 2008





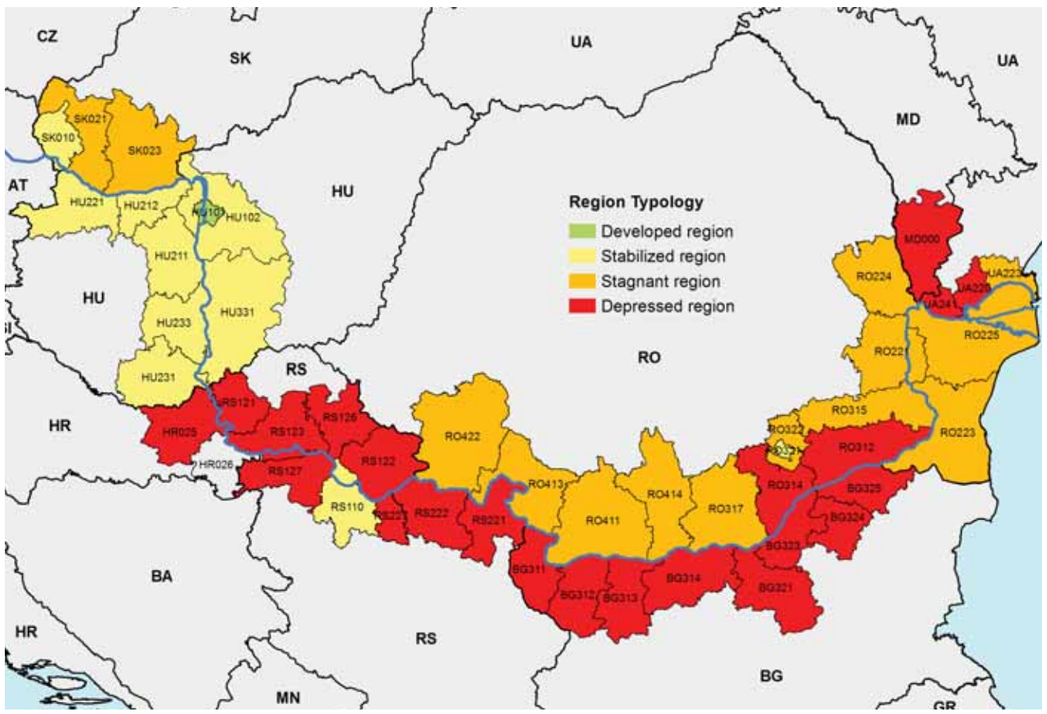
Map 59: Natural Conditions Evaluation and Typology of Danube Regions - Year 2020

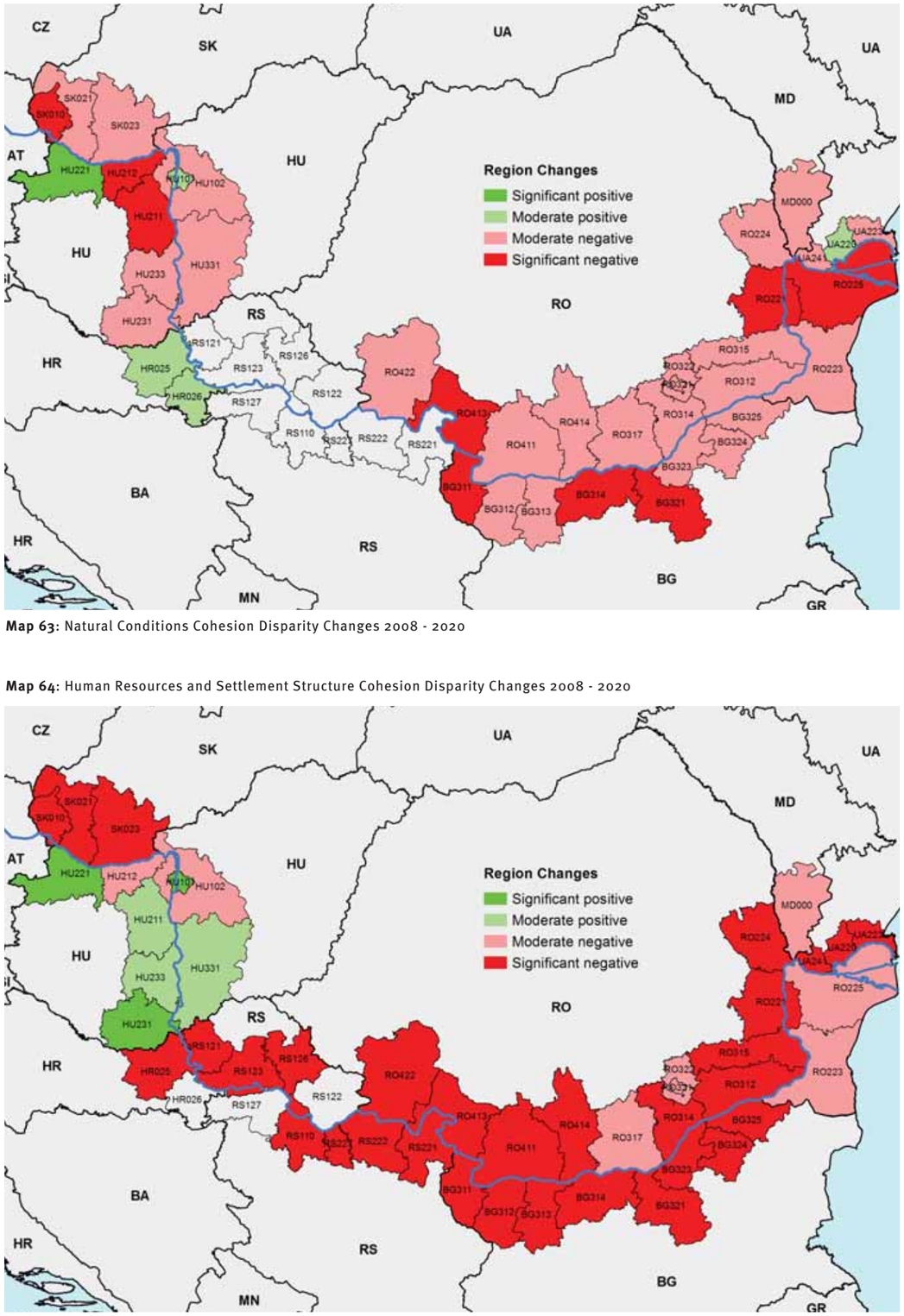
Map 60: Human Resources and Settlement Structure Evaluation and Typology of Danube Regions - Year 2020



Map 61: Transport and Technical Infrastructure Evaluation and Typology of Danube Regions - Year 2020

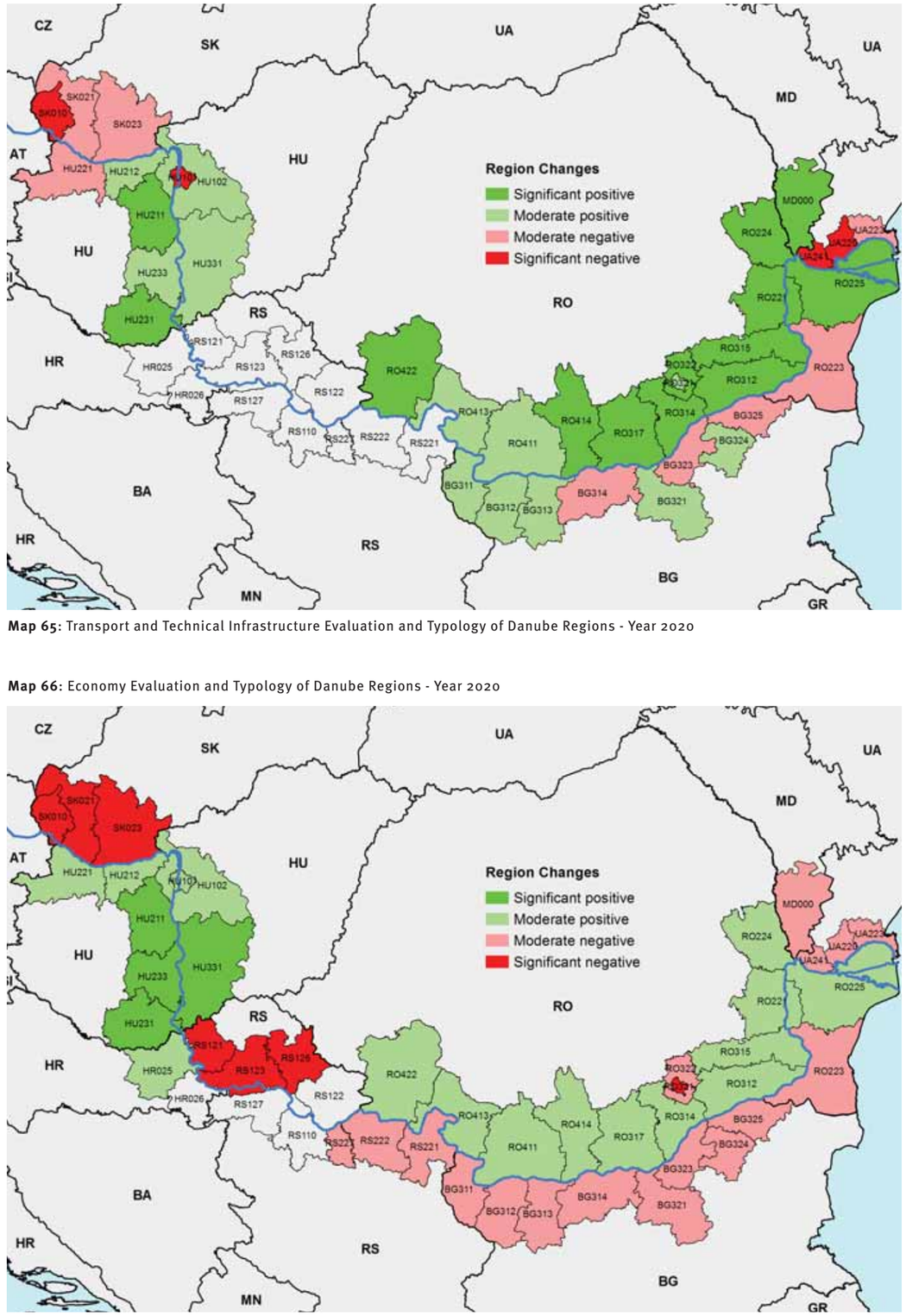
Map 62: Economy Evaluation and Typology of Danube Regions - Year 2020





Map 63: Natural Conditions Cohesion Disparity Changes 2008 - 2020

Map 64: Human Resources and Settlement Structure Cohesion Disparity Changes 2008 - 2020



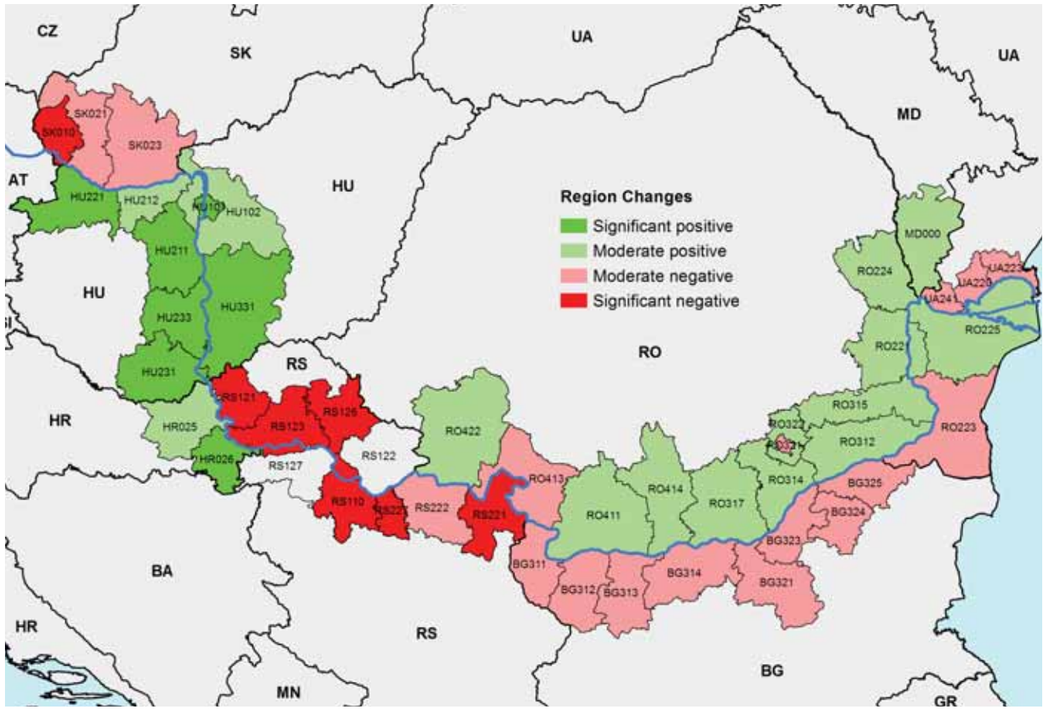
Map 65: Transport and Technical Infrastructure Evaluation and Typology of Danube Regions - Year 2020

Map 66: Economy Evaluation and Typology of Danube Regions - Year 2020

Danube regions dynamics evaluation

The predicted 2020 indicator values have been completed on the basis of the experts' estimations of individual involved Danube countries. The following comparisons of the aggregated values of indicators according individual General schemes shows, that in some countries the experts estimations were more optimistic, then in the others. It is necessary to create a method, which will help to minimize these differences.

Map 67: Comprehensive Cohesion Disparity Changes 2008 - 2020



ADS and CDR regions – metropolitan and regional polycentric settlement systems

As concerns the CDRs, its core areas has been defined on the basis of computer evaluation on accessibility of existing cities to the border crossing point. Taking into consideration the measures and strategied at the level of DRs the CDRs strategies were identified. The core areas of CDRs represents a big potential for promoting a balanced pattern of attractive and accessible growth areas on the Danube.

There were identified 5 ADS on the middle and lower Danube, which represents the formation of settlement along Danube settlement structure consisting of metropolitan areas and Danube regional systems of settlements (basically CDRs)

Recommendations

According the original plan of ARGE DOANAU WE SP it is expected to finish the whole Donauregionen concept with implementation phase. It is supposed the final step will has the name Donauregionen++.

At the end of the D+ project it was proposed to initiate a special supporting step between D+ and D++ which will concentrate on the improvement of the developed software. The reason is to start implementation phase with sufficiently ready tools, SO as the implementation will concentrate on the communication with the main final beneficieries – danube regions, as well as bigger Danube cities and ports.

Long term (main) objective of this project would be the development and verification of the tools for implementation of strategies for increase potential of Danube regions by spatial planning and its tools.

This long term goal is based on the objectives of ARGE DONAULANDER and follows the long-term goal of the project DONAUREGIONEN +.

This long term objective will be fulfilled by these specifics objectives:

(1) to develop and verify functionality of Danube Spatial Planning Information System (DANIS),

(2) to develop and verify functionality of Danube Spatial Planning Network (DANNET) ant its components (DANCE and DANOD),

(3) to verify the method of implementation the Danube region strategy in two selected Cross-Danube regions (Slovak-Hungarian – Nové Zámky-Komárno/Komárom-Tatabánya and Bulgarian-Romanian – Silistra-Calarasi).

Long term objective is to propose, develop and verify the method of implementation the Danube region strategy – in two selected CDR regions – Slovak-Hungarian – Nové Zámky-Komárno/Komárom-Tatabánya and Bulgarian-Romanian – Silistra-Calarasi. Specific objective is to develop the main components of the Danube Spatial Planning Network (DANNET) and verify its functionality. It means (1) Danube Spatial Planning Information System (DANIS) (see 3.5) (2) Danube Spatial Planning Centre (DANCE) and (3) Danube Spatial Planning Nodes (DANOD).

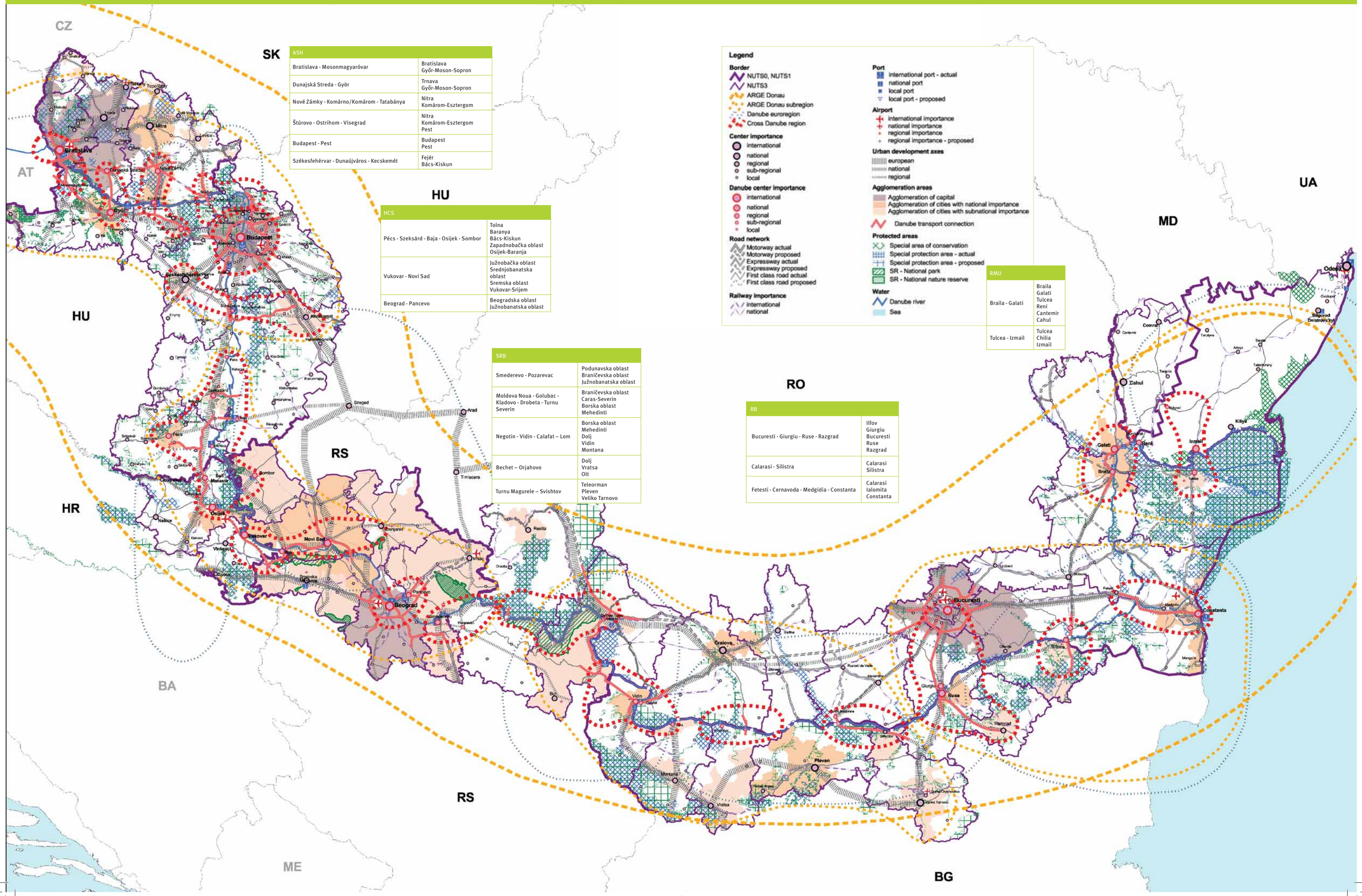
DANIS is the Danube Spatial Planning Information System, based on the outputs and results of the InterregIIIB/CADCES project Donauregionen and SEE project Donauregionen+. It will further developed as WEB portal oriented for support of coordination of spatial planning activities. It could alSO serve as an information point for all those who are interested of this part of European territory (foreign investors, public association, euroregions, etc.). In this project within the DANIS activities, following components will be developed: ADMIN, PUBLICITY, META, GIS, MANAGER, KNOWLEDGE and PLAN.

DANNET represents the network for Danube Regions spatial planning activities with the objective to increase the utilising of Danube development potential. It is planned that the DANNET will be created as EGTC during the project? or as a part of D++?. DANNET structure consists of the DANCE and Danube countries DANODs.

DANCE is the Danube Spatial Planning Centre, the institution, organising the whole process of DANNET at transnational cooperation level. It will be responsible for the DANIS development and operation.

DANOD is the national DANIS development nodes, responsible for DANIS maintenance at national level as well as implementation of DANIS development activities in specific Danube countries.

Relation of ARGE DONAU Subregions, Cross Danube Regions (CDR) and the Danube regions (DR) in Donauregionen + project area of interest



ASH	
Bratislava - Mosonmagyaróvar	Bratislava Győr-Moson-Sopron
Dunajská Streda - Győr	Trnava Győr-Moson-Sopron
Nové Zámky - Komárno/Komárom - Tatabánya	Nitra Komárom-Esztergom
Štúrovo - Ostrihom - Visegrad	Nitra Komárom-Esztergom Pest
Budapest - Pest	Budapest Pest
Székesfehérvar - Dunaújváros - Kecskemét	Fejér Bács-Kiskun

HCS	
Pécs - Szeksárd - Baja - Osijek - Sombor	Tolna Baranya Bács-Kiskun Zapadnobačka oblast Osijek-Baranja
Vukovar - Novi Sad	Južnobačka oblast Srednjobanatska oblast Sremska oblast Vukovar-Srijem
Beograd - Pancevo	Beogradska oblast Južnobanatska oblast

SRB	
Smederevo - Pozarevac	Podunavska oblast Braničevska oblast Južnobanatska oblast
Moldova Noua - Golubac - Kladovo - Drobeta - Turnu Severin	Braničevska oblast Caras-Severin Borska oblast Mehedinti
Negotin - Vidin - Calafat – Lom	Borska oblast Mehedinti Dolj Vidin Montana
Bechet – Orjahovo	Dolj Vratsa Olt
Turnu Magurele – Svishtov	Teleorman Pleven Veliko Tarnovo

RB	
Bucuresti - Giurgiu - Ruse - Razgrad	Ilfov Giurgiu Bucuresti Ruse Razgrad
Calarasi - Silistra	Calarasi Silistra
Fetesti - Cernavoda - Medgidia - Constanta	Calarasi Ialomita Constanta

RMU	
Braila - Galati	Braila Galati Tulcea Reni Cantemir Cahul
Tulcea - Izmail	Tulcea Chilia Izmail

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Nr.	Project Partner	Code
1	Ministry of Transport, Construction and Regional Development of the Slovak Republic	LP
2	Institute of Spatial Planning, Bratislava, Slovakia	ERDF PP1
3	Bratislava Self-Governing Region, Bratislava, Slovakia	ERDF PP2
4	Trnava Self-Governing Region, Trnava, Slovakia	ERDF PP3
5	Nitra Self-Governing Region, Nitra, Slovakia	ERDF PP4
6	The Self-Government of Pest County, Budapest, Hungary	ERDF PP5
7	Pest County Regional Development Non-profit Agency, Budapest, Hungary	ERDF PP6
8	Scientific Association for Spatial Development, Gödöllő, Hungary	ERDF PP7
9	National Association of Municipalities in the Republic of Bulgaria, Sofia	ERDF PP8
10	INCD URBANPROIECT, Bucharest, Romania	ERDF PP9
11	Caras - Severin County Council, Resita, Romania	ERDF PP10
12	Association of Tourism Development in Moldova	10% PP1
13	Odessa National Polytechnic University, Odessa, Ukraine	10% PP2
14	Odessa Regional State Administration - General Department of Foreign Economic Activity and European Integration, Odessa, Ukraine	10% PP3
15	Agency of Regional Development, Odessa, Ukraine	10% PP4
16	Republic Agency for Spatial Planning of the Republic of Serbia, Belgrade	10% PP5
17	Provincial Secretariat for Regional and International Co-operation – Executive Council of Autonomous Province of Vojvodina, Serbia	10% PP6
18	Institute for Spatial Organization of Osijek Baranja County, Osijek, Croatia	10% PP7
19	Vukovar-Srijem County - European Integrations Associate, Vukovar, Croatia	10% PP8

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WP4 coordinator	Oana Popescu
WP5 coordinator	Lajos Veres
WP6 coordinator	Ľubomír Macák
WP7 coordinator	Vojtech Hrdina

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	WP6					
	Team leader: Prof. Dejan Dordević					
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