

# **Slovakia-Hungary - Cross-border Spatial Study**

ESPON Seminar, 8<sup>th</sup> December  
Bratislava

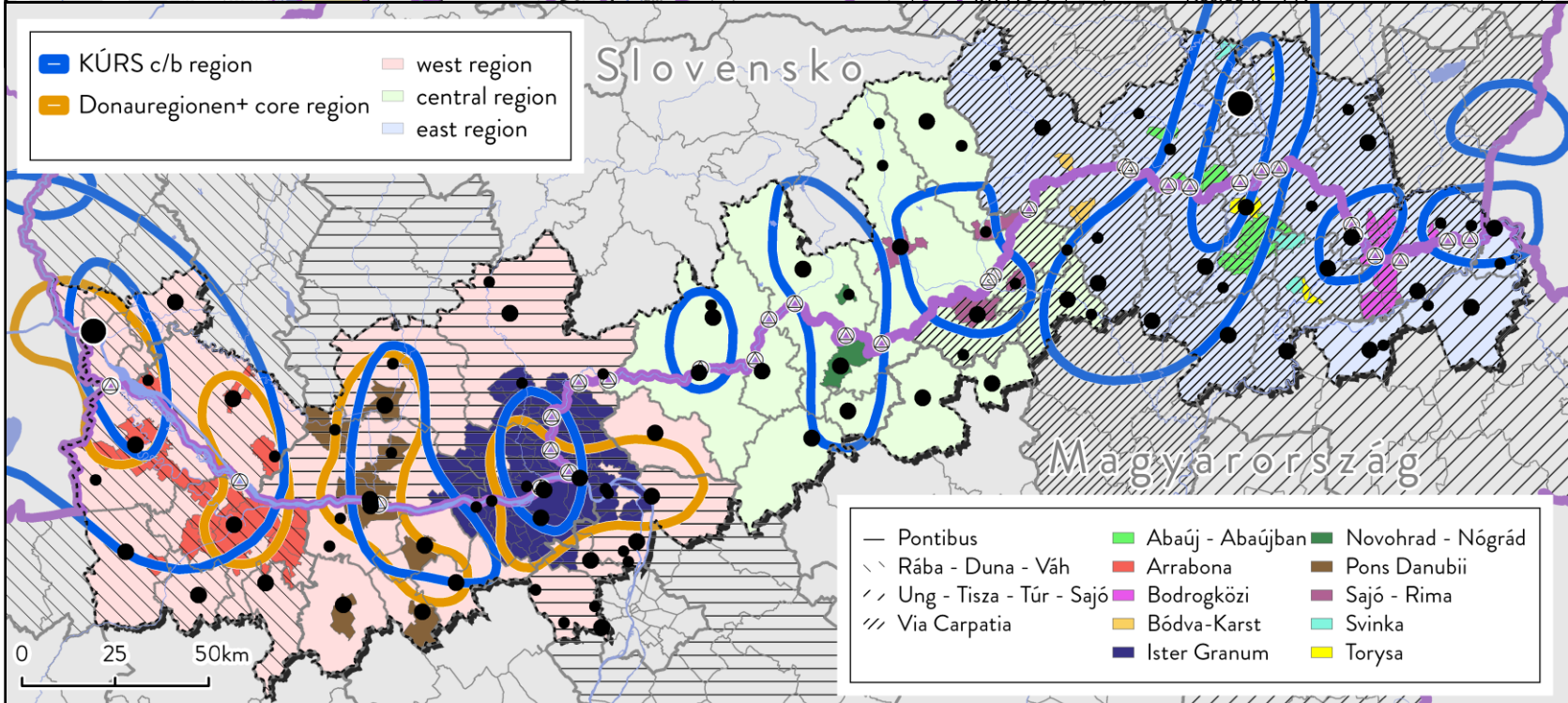
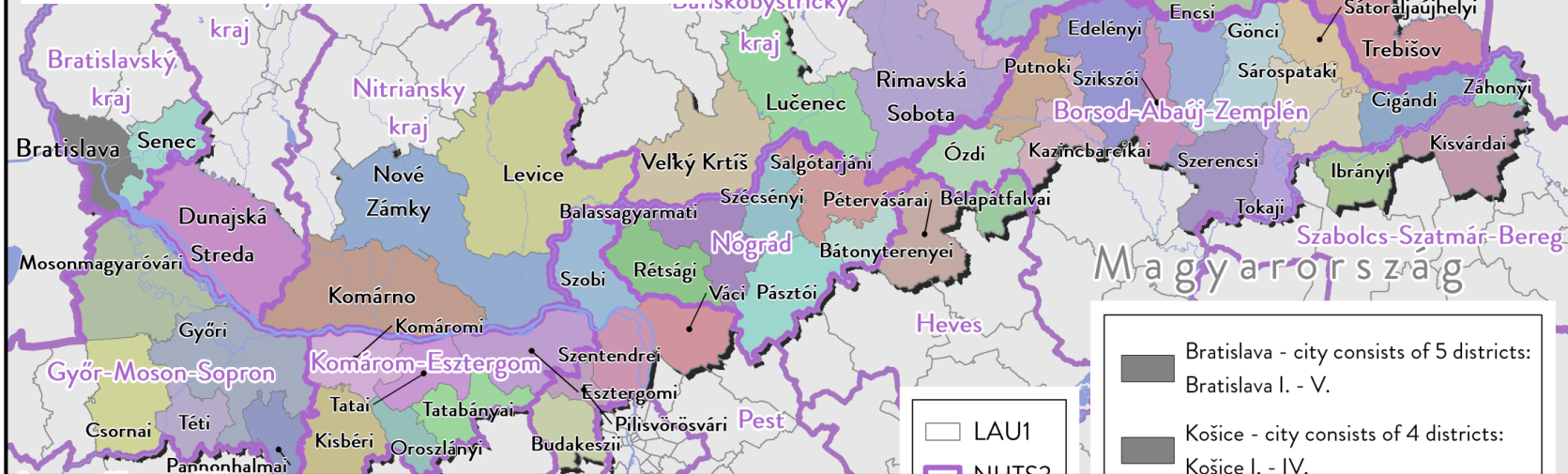
# Background

- The joint planning study of the Hungarian-Slovakian border region was prepared in 2005.
- In 2013 the governmental bodies responsible for spatial planning decided to revise and update.
- Supervisioned and funded by: **Hungarian Prime Minister's Office Department of Spatial Planning and Urban Management** and **Ministry of Transport, Construction and Regional Development of the Slovak Republic**
- Processors: **Lechner Knowledge Center (HU)** and **Inštitút priestorového plánovania (SK)**

# Goal & Message

- **Goal:** to renew the mutual knowledge in the field of planning and coordination activities in the Hungarian-Slovak border area within the context of settlement structure development (infrastructure, environment, social and economic factors etc.)
- **Message:** to specify guidelines and recommendations in the cross-border area for regional development and spatial planning in order to ensure requested settlement environment quality

# Area of interest



# Structure and Outputs

- Investigation
- SWOT
- Recommendations and suggestions (Economy, Technical and Transport infra., Environment)
- Maps (in digital form)
  - Wider relations
  - Comprehensive urban design
  - Transport and technical infrastructure
  - Environment
- Time schedule: 19 months

# Steps (how do we cooperate?)

1. Common methodology developed
2. Dividing of responsibilities of individual parts
3. Regular project meetings and specific workshops  
(Common SWOT development)
4. Continuous exchange of information/data via e-mails
5. Communication and outputs in English; Finally translated into national languages
6. Common geodatabase development

# We are facing these obstacles (1)

Type of obstacle	Obstacle	Solution
Technical	database (statistical data availability, time factor) compatibility of data (collection methodology) - "identical" data are not comparable due to different methodologies	Identifying of common available (selected) data (i.e. using of CENSUS data) Need for harmonization of data Creating map layouts with different data / category (extended legend)
	Availability of GIS data	Use of data from other projects Use "open source" and freely available transnational (European) data ( <b>CORINE, Natura 2000</b> ) For purposes of SK-HU Study data from CBC projects (TransHUSK and Transhusk Plus) - database of POIs were used.
	Projections GIS (Geodatabase structure, different standards; display projection)	Need for harmonization of data and determine its <b>own projections</b>

# We are facing these obstacles (2)

Type of obstacle	Obstacle	Solution
Technical	(Professional) Terminology & definitions	Elaboration of a terminological dictionary (glossary) Finding a compatible data Own calculation (of the absolute data)
	Language barrier The risk of changing the meaning of the text during multiple translation (HU->EN->SK->EN->HU)	English using additional control
	Robust database - Problematic orientation in the data - Publication / presentation of data	elaboration of the code list <b>GIS applications</b>

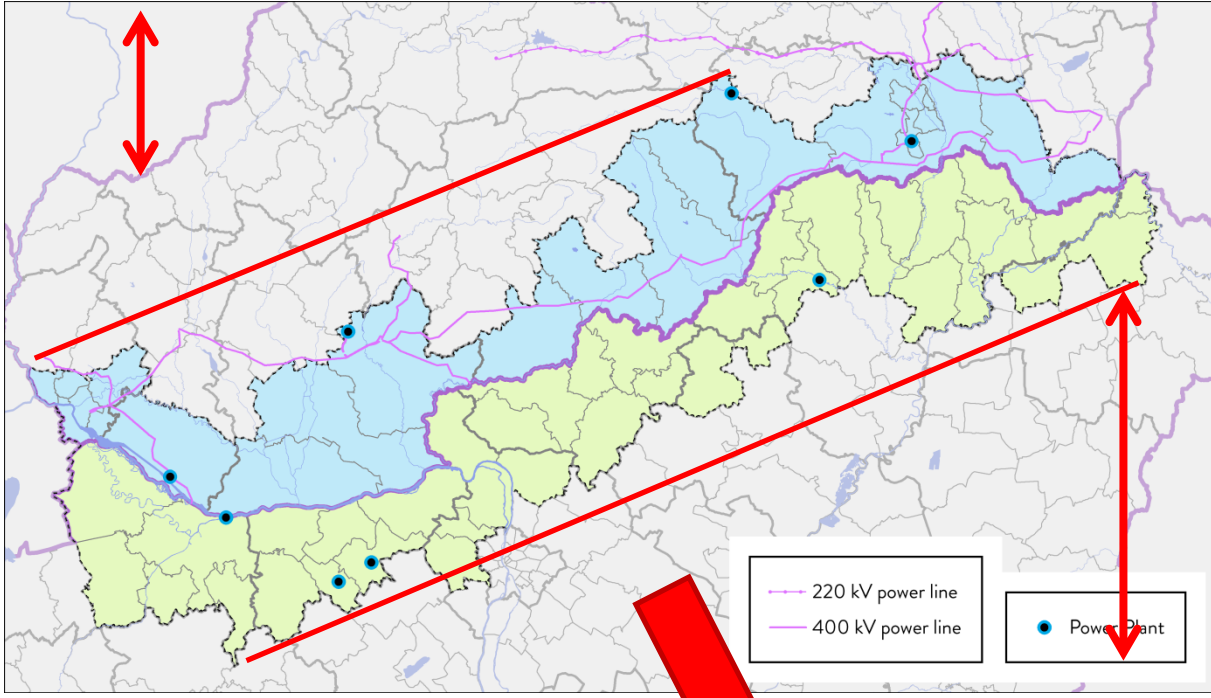


# We are facing these obstacles (3)

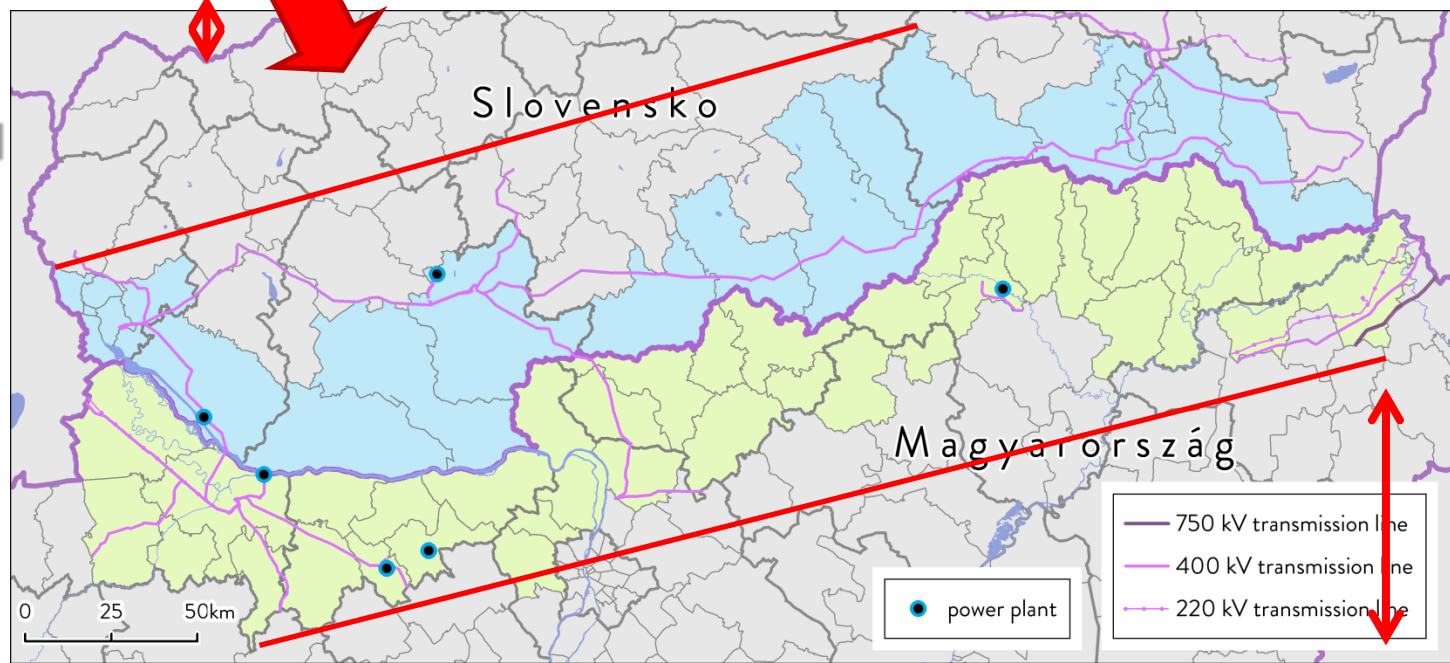
Type of obstacle	Obstacle	Solution
Administrative and legal	Copyright by data providers (National Basic geodatabase) - restricting the use of data abroad	Putting the necessary data sources; data are tied to the project; necessary to inform the data (output as PDF, PNG)
	Public procurement – different conditions (time consuming) in different countries	Harmonisation of time schedule (from HU side)

Cartographic  
projection  
usage  
problem

Lambert Azimuthal  
Equivalent ETRS-89

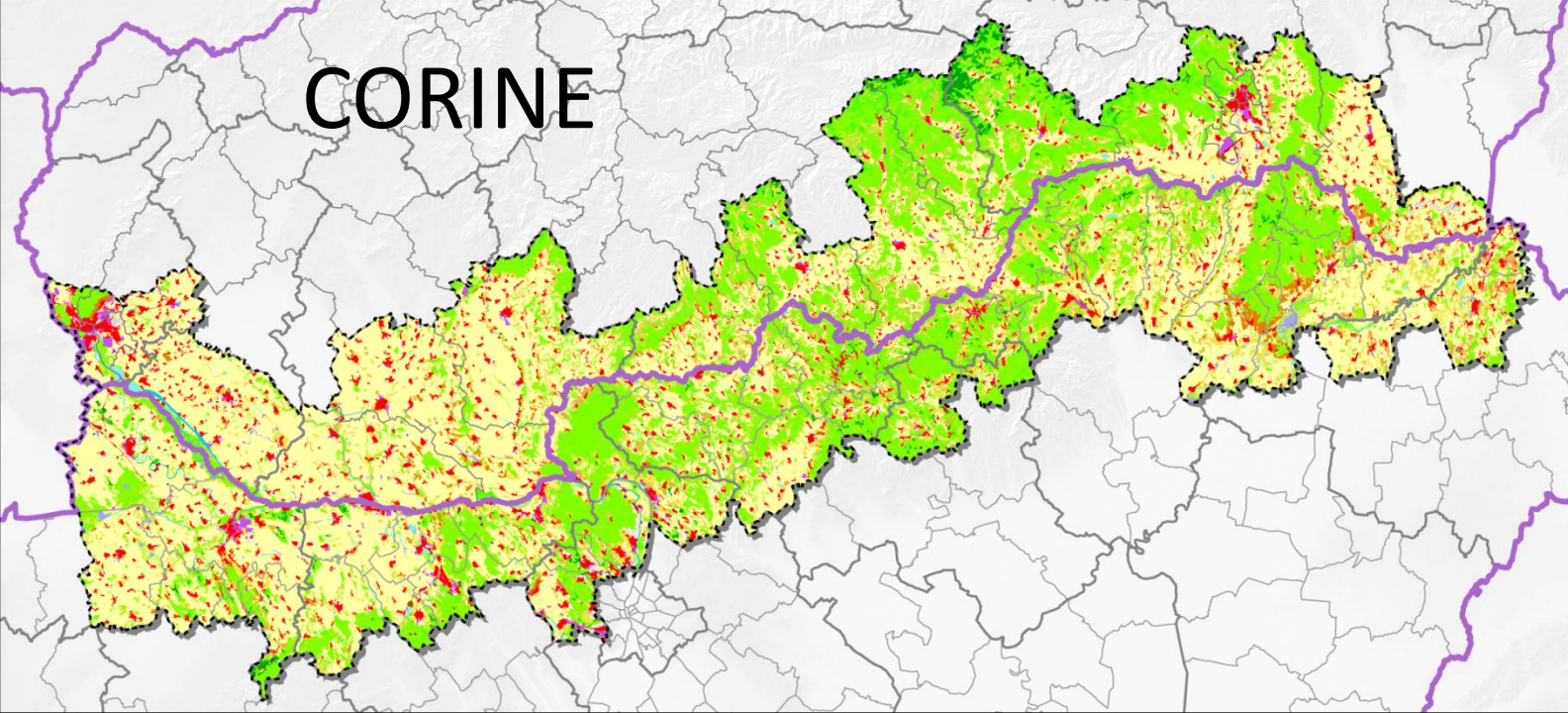


Lambert Azimuthal  
Equivalent  
ETRS-89 optimized  
for the SK-HU  
border area

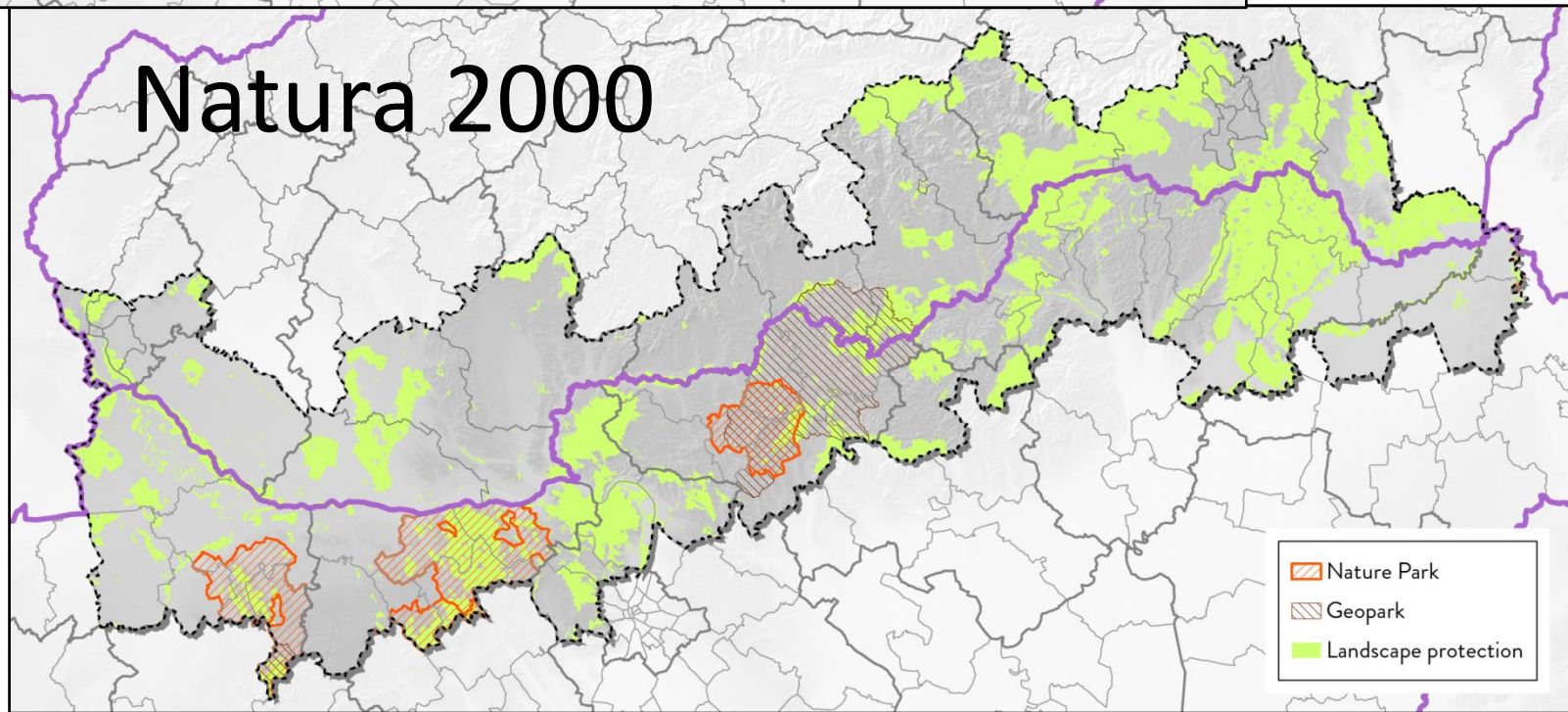




# CORINE



# Natura 2000





# GIS application and publication

ippoz.maps.arcgis.com/apps/webappviewer/index.html

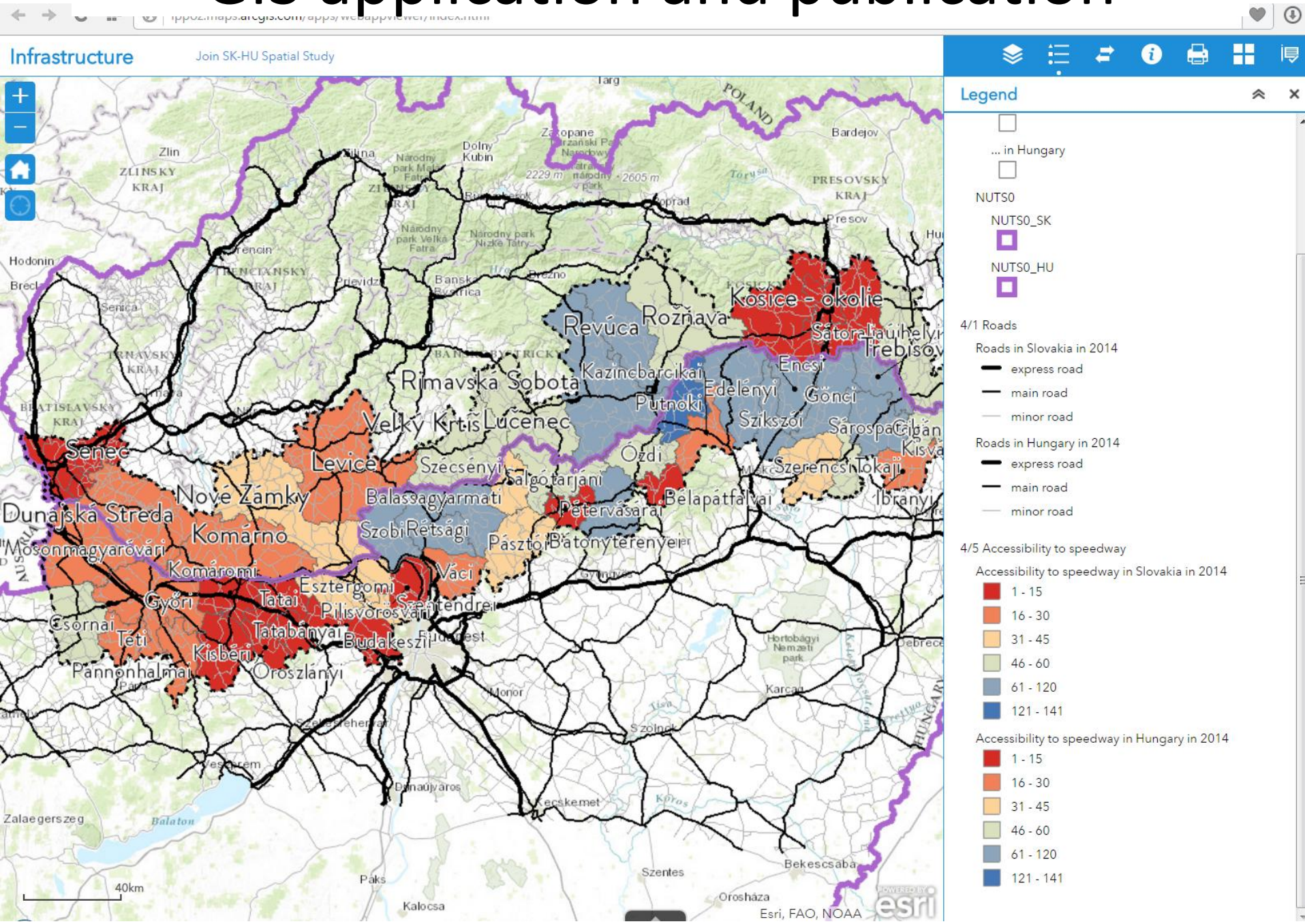
Society & Economy Join SK-HU Spatial Study

**Operational Layers**

- APPLICATION\_MAP\_SOC\_ECO
- Area of interest
- 1/7 Settlement System
- 1/8 Settlement Population
- 2/1 Population change between 2001-2014
- 2/4 Ethnic HU / SK Population Ratio in 2011
- 2/5 Employment rate in 2011
- 2/6 Yearly average of unemployment / ratio within working age population in 2014
- 2/7 Long-term unemployment / ratio within the unemployed population in 2014
- 2/9 Population with university or college diploma in 2011
- 2/10 Number of commuting employees / all employees in 2011
- 3/2 Number of enterprises per 100 inhabitants in 2014
- 3/3 Sectoral Breakdown of Enterprises in 2014
- 3/4 Proportion of Service Branches in 2014
- 3/6 Active Tourism
- 3/7 Cultural Tourism Sites
- 3/8 Water Tourism
- 3/10 Accommodation in 2014
- 3/11 Number of Guests in 2014

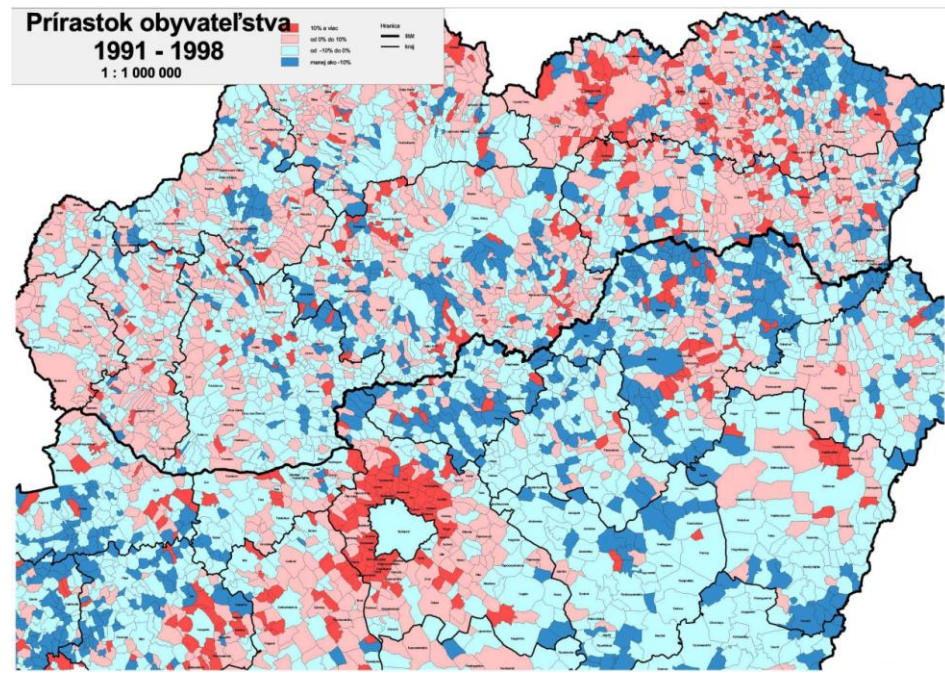
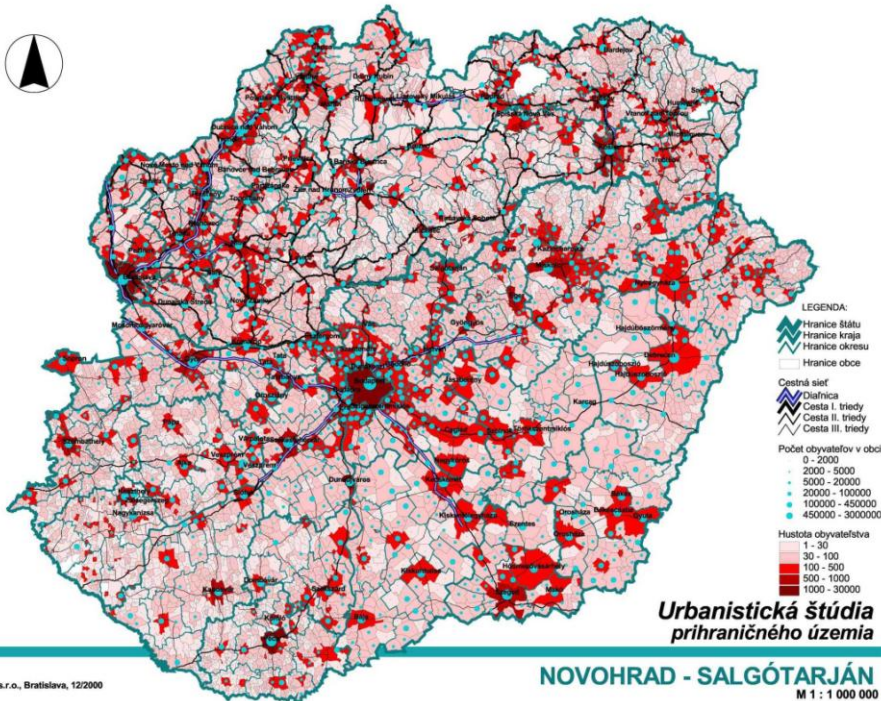
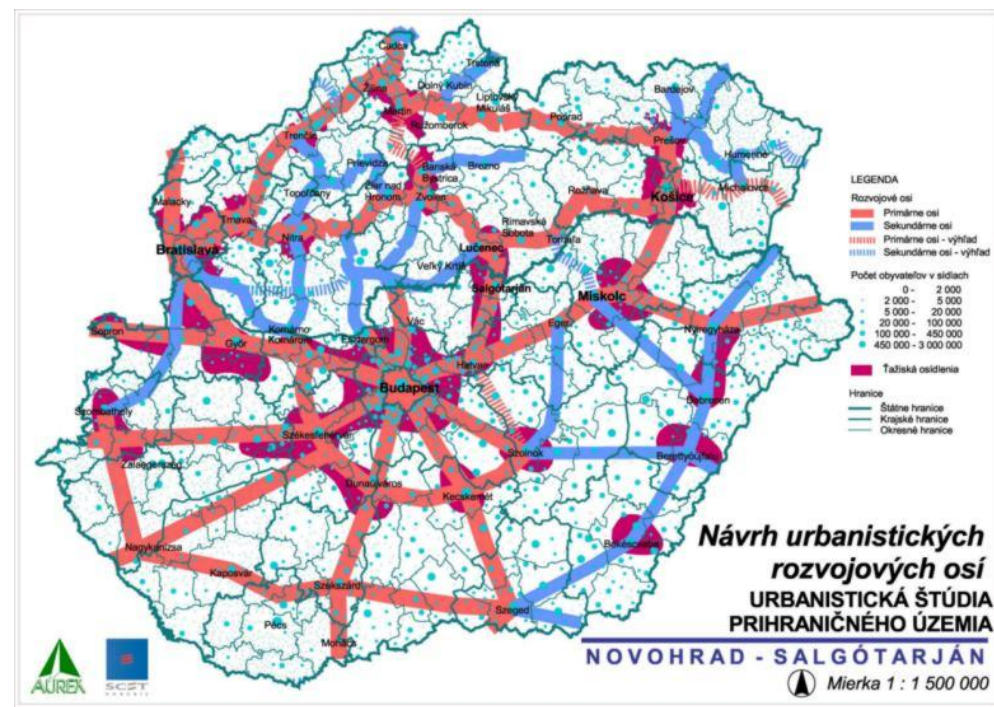


# GIS application and publication





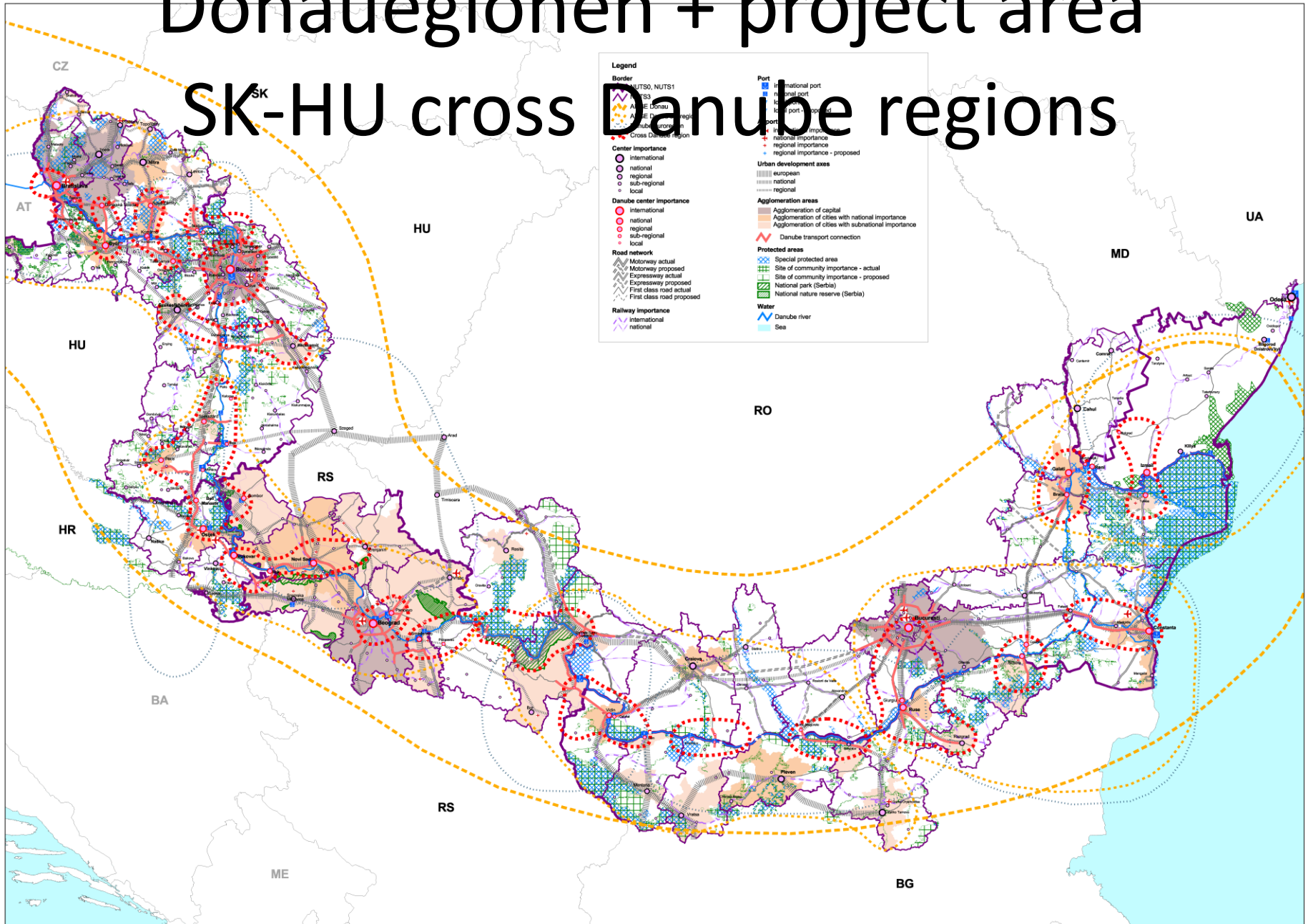
# Previous projects and starting points





# Donauregionen + project area

## SK-HU cross Danube regions



gis.donauregionen.net/dplus/WP6Crossdanuberegions/CDRstrategies.aspx

Mode:  View  Edit  Layout

DOTNetNUKE COMMUNITY

Admin

**donauregionen+**

**SOUTH EAST EUROPE**  
CENTRE FOR CO-OPERATION

**The Spatial Development of Interregional Co-operation in the Danube Space**

Tuesday, December 6, 2016 | Pavol Petrik | Logout |  Web  Site

Home WP1-Project management WP3-GIS WP4-Analyses WP5-Strategies WP6-Crossdanube regions WP7-Comprehensive strategy Admin

### ▾ Crossdanube Region Strategies

<b>Priority 1.1</b>	Water management and wastewater utility development <input type="button" value="Delete priority 1.1"/>
<b>Reasoning</b>	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
<b>Description</b>	From the hydrogeological point of view is the most important area of territory, both in terms of quantity and quality of groundwater, especially of the lowland area along the Danube. The Danubian Plain is a major source of groundwater - Rye Island, which is an important reservoir of water not only in dealing with the territory. It is the largest river island in Europe and represents the largest reservoir of drinking water in Central Europe.
<b>Relations &amp; Connections</b>	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 Bratislava 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

**CDR Strategies accessible via  
D+ planning portal (SDSS + GIS servers)**



# „After the project“

- Monitoring and evaluation of the settlement environment quality at the level of LAU2 via CB planning portal
- Need for setting-up governance structures in order to apply the results to the forming of CB polycentric settlement systems

ippoz.maps.arcgis.com/apps/webappviewer/index.html

Komplexný výkres priestorového usporiadania a funkčného využívania územia

Esri World Geocoder

Legenda

**Komplexný návrh**

- pamiatky
  - pamiatková rezervácia (MPR, PRLA)
  - pamiatková zóna
  - národná kultúrna pamiatka
  - národná kultúrna pamiatka (hrad, zrúcanina)
  - múzeum, galéria a muzeálne expozície
- skládky

gis.donauregionen.net/nsk/Measure/measureRegion\_edit.aspx

06.12.2016 užívateľ NSK Logout

Domov Obec ► Okres ► NSK ►

**Prognóza podľa miery**

Región Komárno

Indikátor Hrubá miera celkového prírastku

Rok	2011	Xmin	-4,27
Súčasná hodnota (X)	-1,21	Xmax	2,62
Relatívna hodnota (X)	-0,33	Priemer	-1,40
Počet hodnôt	7	Smerodajná odchýlka	2,16

Názov	CB	Dopln	Min	Max	P (%)
Nie sú zadane žiadne miery (vložiť novú)					

Dopady					
Rok prognózy	Yd - prírastok	2020	2020	2020	2020
Prognóza		0,00	0,00	0,00	0,00
Absolútna hodnota (Y)		-1,21	-1,21	-1,21	-1,21
Relatívna hodnota (Y)		-0,33	-0,33	-0,33	-0,33
Ymin		-4,27	-4,27	-4,27	-4,27
Ymax		2,62	2,62	2,62	2,62

Scénar pre región

Rok	Hodnota	LR
1991		-6,344
2001	-3,899	-3,717
2005	-2,361	-2,666
2011	-1,211	-1,089
2020 min	-1,211	1,276
2020 max	-1,211	
2020 min'	-1,211	
2020 max'	-1,211	

r = 0,98

Nitra self-governing region planning portal  
(SDSS + GIS servers)

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